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RESEARCH ARTICLE

Redescription of the female of *Apseudopsis apocryphus*, some remarks about the female of *A. bacescui* and description of the males of *A. apocryphus* and *A. bacescui* (Crustacea, Tanaidacea, Apseudidae)

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Abstract

The female with oostegites of *Apseudopsis apocryphus* are redescribed in detail, in the case of *A. bacescui* some remarks about the female with oostegites are given. The male of the species *A. apocryphus* and the subadult male of *A. bacescui* are described.

Keywords

Tanaidacea, Apseudomorpha, Apseudidae, *Apseudopsis apocryphus, A. bacescui,* Coast of Israel, Balearic Sea, Spain.

Introduction

As in the previous paper (Bâlcu 2021) about redescription of the female with eggs of *Apseudopsis arguinensis* (Guțu, 2002), in this paper the female with oostegites of the species *A. apocryphus* (Guțu, 2002) are redescribed and some remarks regarding the

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female with oostegites of *A. bacescui* (Guțu, 2002) are added. The male of the species *A. apocryphus* and the subadult male of *A. bacescui* are described. These species were briefly described by Guțu (2002), as he mentioned himself in the introduction part and by using the term *diagnosis* for the description of all 10 studied species.

A map with areas from where the type material were collected are added.

Material and methods

The type material examined during this study was collected from Mediterranean Sea, Coast of Israel, Haifa in the case of *A. apocryphus,* and from Balearic Sea, near Barcelona (Spain) for *A. bacescui* (Fig. 1). The map (Fig. 1) was created using QGIS 3.28.3-Firenze software adding two layers (with point and polygon geometry).

The examined material is deposited in the collections of "Grigore Antipa" National Museum of Natural History, Bucharest. Dissections were made under a CARL ZEISS SM-XX CMO Citoplast stereomicroscope. Appendages were mounted on temporary glass slides in a mix of 70% ethanol and glycerin and observed with an Olympus CX 21 microscope, drawings were made with a *camera lucida* attached to the microscope. Figures were prepared by scanning and digitizing the plates.

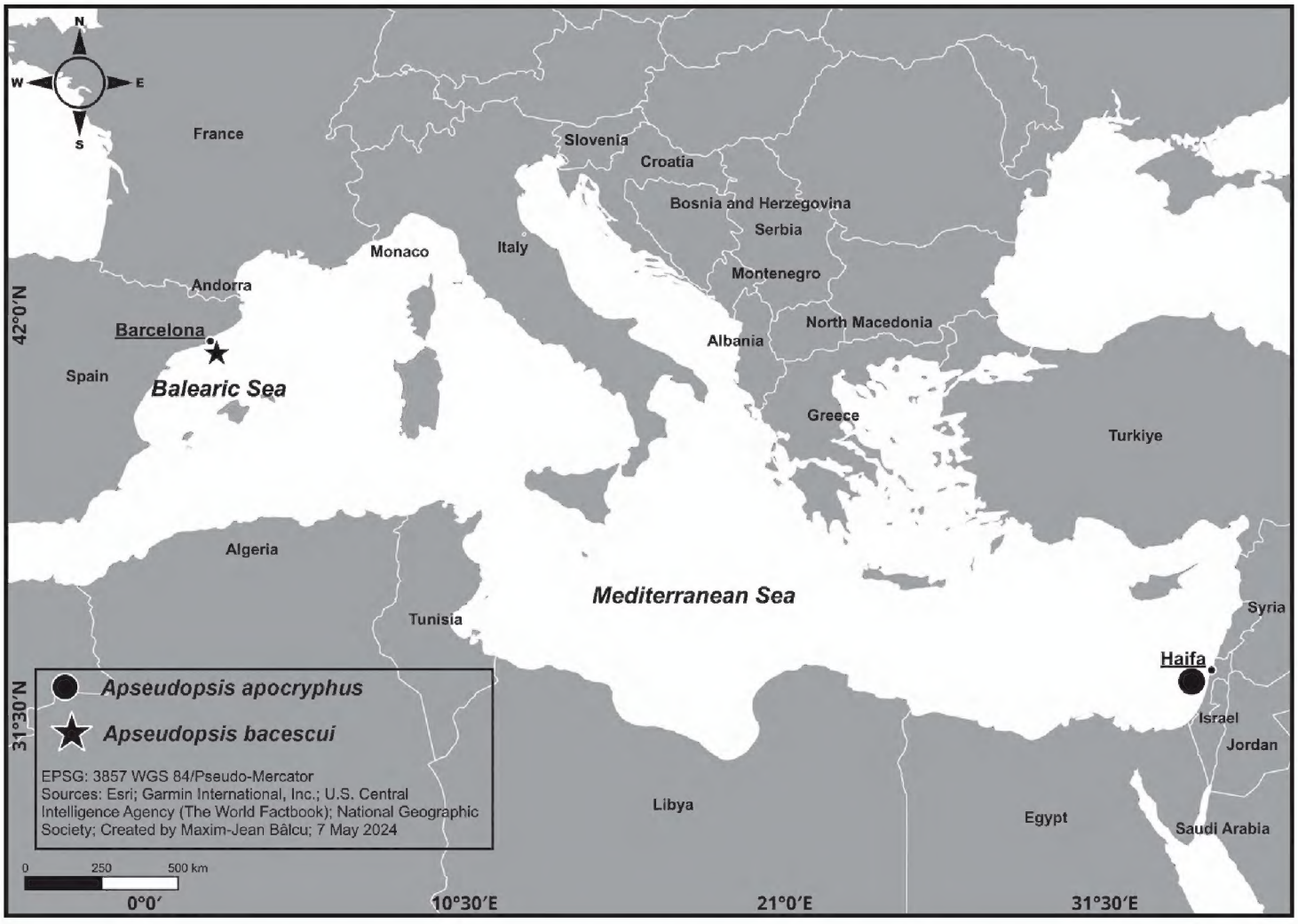

Figure 1. Map with the areas where the type material of *A. apocryphus* (circle shape) and *A. bacescui* (star shape) were collected.

The morphological terminology follows, mostly, that proposed by Larsen (2003), Bamber and Sheader (2005), and Bâlcu (2021). The terms "bipinnate seta" or "bipinnate spine" was adopted in the sense of seta or spine with both edges with fine setation (e.g. maxilla bipinnate setae of inner lobe of fixed endite, Fig. 7A; bipinnate ventral spines of pereopod 6 propodus, Fig. 5C').

***Apseudopsis apocryphus* (Guțu, 2002)**

Material examined. Holotype: 1 female with oostegites (length about 3.8 mm), Mediterranean Sea (Levantine Sea), Coast of Israel, Haifa, 1973, deposited in the collections of "Grigore Antipa" National Museum of Natural History, No. 250.222.

Allotype: 1 male (length about 5.6 mm), with the same collecting data, deposited in the same museum, No. 250.223.

Paratypes: 1 female with oostegites and 1 male (dissected), from a lot of 23 specimens, with the same collecting data, deposited in the same museum, No. 250.224.

Redescription of female with oostegites

Body (Fig. 2A) dorsoventrally flattened, approximately 5.7 times as long as wide; length about 5.0 mm.

Cephalothorax (including rostrum) (Fig. 2A) approximately 17% of body length, about as long as wide, equal to the length of the first two pereonites combined. Rostrum pointed, with rounded shoulders, relatively short and broad at base. Eyelobes unpigmented, with an acute process.

Pereon (Fig. 2A) approximately 60% of body length, about 3.6 times as long as carapace length; decreased in width from the first pereonite to the last; each pereonite much wider than long, about 0.43, 0.45, 0.61, 0.67, 0.65 and 0.53 times as long as wide. Pereonites 2–6 with a row of 9–15 simple setae on the inner of anterolateral corners and one or two posterolateral simple setae. Pereonite 1 with rounded posterolateral corner. Pereonites 2–6 with a spiniform process on each posterolateral corner. Pereonite 3 with hyposphenium. Genital cone conspicuous (not illustrated).

Pleon (Fig. 2A, A') approximately 16% of body length, about as long as first two pereonites together, with five short pleonites, bearing pleopods. Each pleonite expanded posterolateral by a spiniform process. Pleonites 1–4 with three to six dorsal simple setae, three to five lateral plumose setae and three caudal plumose setae (except pleonite 4 which has one simple and one plumose seta, caudally). Pleonite 5 with three dorsal, three lateral and two small caudal simple setae (Fig. 2A'). Each pleonite with a ventral spine-like process, oriented caudally.

Pleotelson (Fig. 2A) about 7% of body length, equal to the length of the pereonite 6, 0.8 times as long as wide, with a swelling in the first half of each lateral side, bearing about 10 simple setae.

Antennule (Fig. 2B) with first peduncular article longest, about 2.6 times as long as wide; inner side with about 13 unequal simple setae, disposed in two tufts: one in the middle with five setae and one distal with eight setae; outer side with 11 long

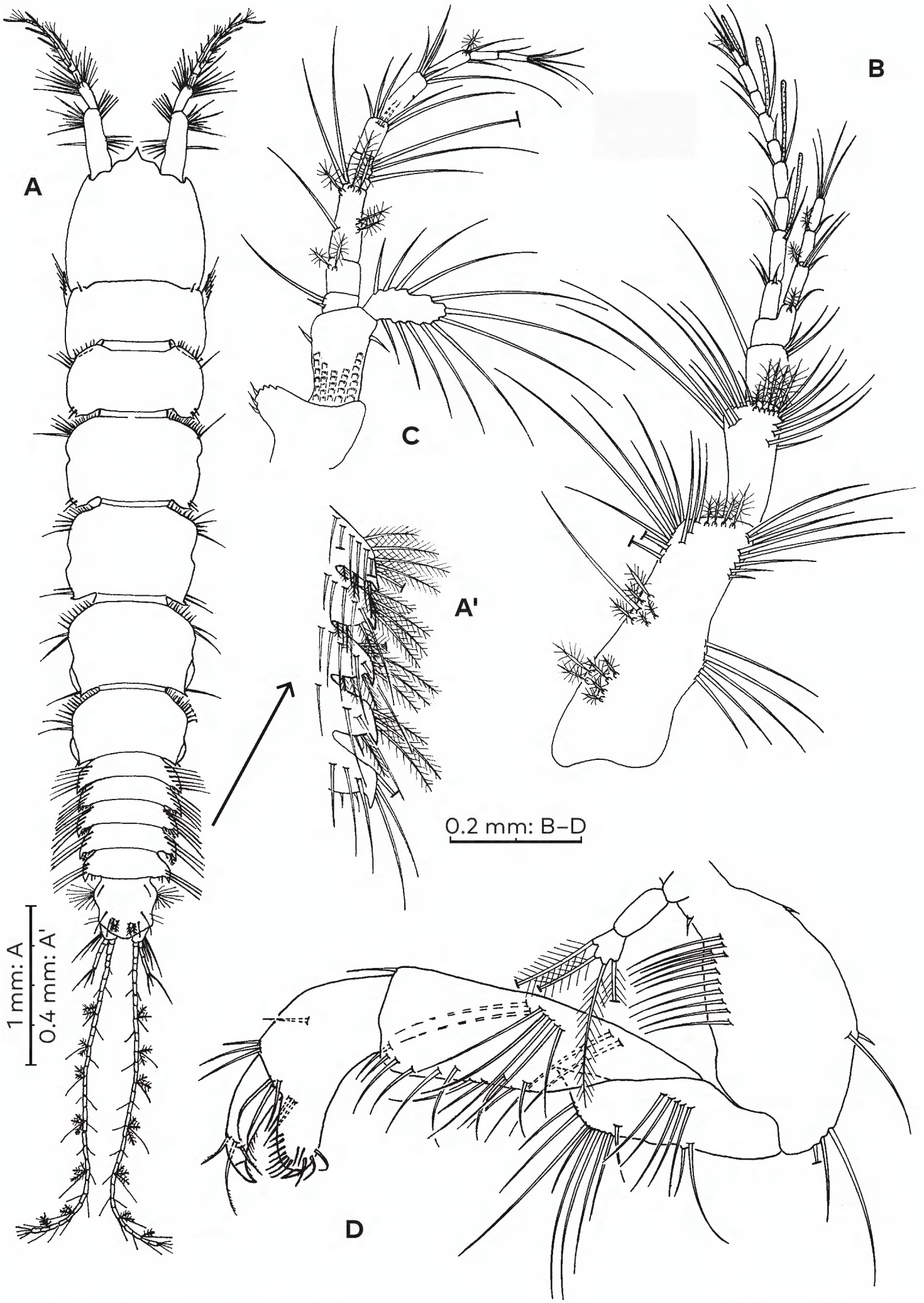

Figure 2. *Apseudopsis apocryphus*, female with oostegites: **A** body, dorsally; **A'** detail of pleonites 1–5, dorsally; **B** antennule; **C** antenna; **D** cheliped.

simple and four penicillate setae, distally, and two tufts with six and five penicillate setae, proximally and medially, one medial long simple seta. Article 2 about 0.4 times as long as article 1, with about seven and eight long simple setae on the inner and outer distal sides, respectively, and five penicillate setae, distally. Article 3 shortest, about 0.4 times as long as article 2, with three simple setae on the inner and one simple seta on the outer side, distally. Article 4 (common) with one penicillate and one simple seta on inner distal margin. Inner flagellum with three articles, first two with one penicillate seta and one to three simple setae; last article with four long simple setae, terminally. Outer flagellum with nine articles; first article with three simple setae, articles 2, 4, 6 and 8 bearing an aesthetasc and two, three simple setae; articles 3, 5 and 7 with one simple seta; article 9 with one penicillate seta and two simple setae, terminally.

Antenna (Fig. 2C) peduncle with five articles, first peduncular article short and thick, having an inner dentiform expansion and three subdistal small simple setae. Article 2 largest, 1.5 times as long as wide, with one small simple seta on inner and outer distal sides; proximally with some rows of scales; squama large, with 12 unequal simple setae around. Article 3 shortest, with one long and one very small simple seta on inner side. Article 4 longer than article 3, with two penicillate setae on the inner side. Article 5 longer than article 3 and 4 together, with three long simple setae on the inner side, and some penicillate setae, mid-outer and distally. Flagellum with six articles; article 1 with three long simple setae on the outer margin; articles 2 and 3 with about seven and five simple setae, respectively; article 4 with one penicillate seta and two simple setae; article 5 with one simple seta; article 6 with five long simple setae, terminally.

Labrum unstudied.

Mandibles (Fig. 3A, B) with three articled palp; article 1 about 1.9 times as long as wide, with 18 long simple setae; article 2 about two times as long as wide, with two rows of three small and three long serrated setae; article 3 a little shorter than the previous one, about three times as long as wide, with seven serrated and seven long simple setae. Pars molaris broken and lost. Pars incisiva and lacinia mobilis of the left mandible (Fig. 3A), with four and three denticles, respectively. Setiferous lobe with four furcate setae and one simple seta, terminally; two very small setae at the base of the palp. Pars incisiva of right mandible (Fig. 3B) with four denticles, setiferous lobe with two furcate setae, two setae broken, one simple seta, terminally, and one stout furcate seta, subterminally; two very small setae at the base of the palp.

Labium (Fig. 3C) with about five small denticles on the outer margin of basal lobe and finely hairs rostral, on anterior part. Palp large, ovate, with three spines, terminally, having very tiny hairs at their base (detail fig. 3C), and finely long hairs on each side of the palp.

Maxillule (Fig. 3D) with biarticled palp ended in four unequal serrated setae. Outer endite with finely hairs on both margins, two very small spines on the inner margin, proximally, 11 stout spines, terminally, and two serrated setae, subterminally.

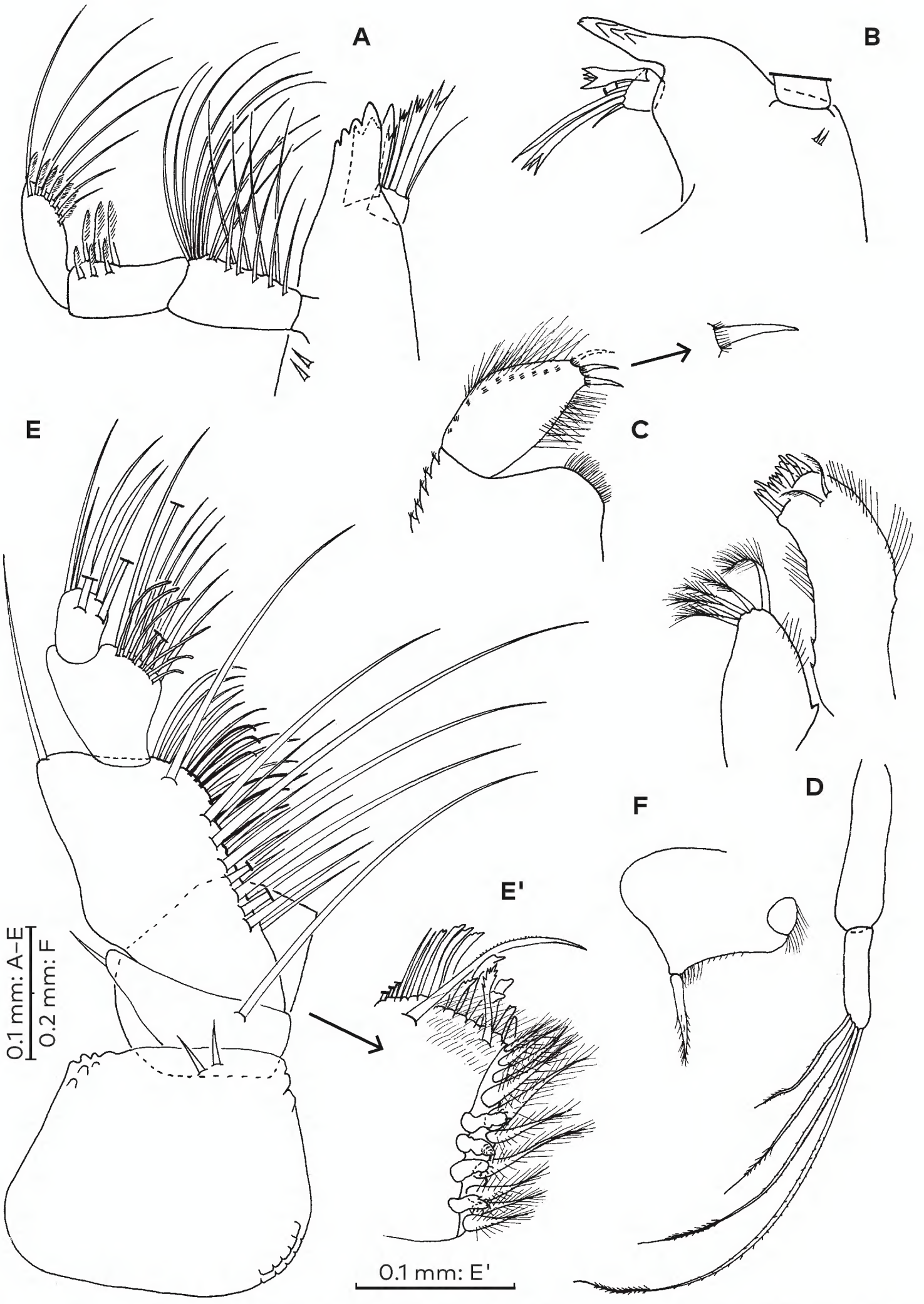

Figure 3. *Apseudopsis apocryphus*, female with oostegites: **A** palp, pars incisiva, lacinia mobilis and setiferous lobe of left mandible; **B** pars incisiva and setiferous lobe of right mandible; **C** labium; **D** maxillule; **E** maxilliped; **E'** maxilliped endite; **F** epignath.

Inner endite with a blunt apophysis and finely hairs on the outer margin and five setulose setae, terminally.

Maxilla unstudied.

Maxilliped (Fig. 3E) basis large, rectangular, about 0.8 times as long as wide, with very small denticles on outer distal corner and inner corners, and two short and thick simple setae, distally. First palp article short and broad, with one very long and thick simple seta on the inner side and one small simple seta on outer distal corner. Article 2 largest, with about 33 simple setae disposed in two or three rows, on the inner margin: one row with eight thick and very long simple setae, another row with about 19 simple setae interspersed with a row of about six curved setae; one long and thick simple seta, exceeding article 4, on outer distal corner. Article 3 longer than article 1 and narrower than the previous one, with two rows of simple setae, on distal inner margin: one row with eight curved simple setae and another row with eight long simple setae. Article 4 very small, with two long and five thick and long simple setae, two of them disposed subterminally. Endite (Fig. 3E') with 10 strong truncate setae, five simple setae and two or three rows of many hairs, on the rostral side; one long and thick finely serrated seta, subterminally. Inner margin with a row of 10 circumplumose setae and four coupling hooks; outer distal margin with hairs.

Epignath (Fig. 3F) cup-shaped, with a stout spine, having many setulae on sides and tiny hairs at the base.

Cheliped (Fig. 2D). Basis about two times as long as wide, with about 11 long simple setae, and one very small simple seta, dorsally; ventrally with one small spine and four long simple setae, and one very small simple seta, proximally; exopod present, tri-articled, last article with four long plumose setae. Merus 3.6 times as long as wide, with about 11 unequal simple setae, ventrally, and five simple setae on the lateral surface. Carpus longest, approximately three times as long as wide, with one simple seta, dorsodistally; about 11 simple setae, ventrally, and four-five simple setae on inner and outer sides. Propodus about 2.3 times as long as wide; palm with one mid-dorsal and three dorsodistal simple setae; fixed finger thick, with two-three simple setae near dactylus joint on both sides, and 12 simple setae around the inner and outer margins, some small serrated spinules (about 10) on the cutting edge; claw small. Dactylus thinner than the fixed finger, with three finely serrated setae, distally, on the inner side; claw stout and stronger than that of fixed finger.

Pereopod 1 (Fig. 4A) fossorial, largest. Coxa small, with a spiniform prolongation having five simple setae, visible dorsally at the level of first pereonite. Basis thick, about 2.7 times as long as wide, with about 12 simple setae, three of them longer, dorsally; about 12 simple setae (five situated medial and seven in distal corner), one distal spine and one proximal penicillate seta, ventrally; exopod present, tri-articled, last article with six long plumose setae. Ischium short, wider than long, with four small simple setae in distoventral corner. Merus well developed, approximately 1.9 times as long as wide, with six simple setae, distodorsally; 11 ventral simple setae and one strong ventrodistal spine; two lateral simple setae, subterminally. Carpus about 1.5 times as long as wide, shorter than merus, dorsal and distodorsal margin with

about 15 long simple setae (some of them longer than propodus) and one strong spine; four simple setae and two strong spines, ventrally; four small simple setae on lateral surface. Propodus about 1.6 times as long as wide, shorter and narrower than carpus, dorsal margin with one penicillate seta, four long simple setae, and two strong spines; ventrally with three strong spines alternating with one or two simple setae (five ventral simple setae in total); one serrated seta near dactylus articulation, and two small simple setae on lateral surface. Dactylus slightly longer than the spines of propodus, mid-dorsally with one small simple seta and one long finely serrated seta (shorter than unguis length), and two small spines, ventrally; unguis stout.

Pereopod 2 (Fig. 4B) larger than the following pereopods. Basis three times as long as wide, with two penicillate and eight simple setae, dorsally; about 10 simple setae, ventrally and four simple setae subterminally; at the base with an oostegite. Ischium short, wider than long, with six simple setae, ventrodistally. Merus about 1.3 times as long as wide, with six long simple setae, distodorsally; one long ventrodistal bipinnate spine (slender than pereopod 1 merus ventral spine) and 12 long simple setae on ventral margin; one lateral long simple seta, subterminally. Carpus about 1.5 times as long as wide, longer than merus, with about 17 simple setae, dorsally, some of them very long, exceeding the tip of the propodus; one ventrodistal bipinnate spine, no longer than spine of the merus, and eight simple setae, ventrally. Propodus 2.5 times as long as wide, longer than carpus, with two bipinnate spines, 10 long simple setae and one penicillate seta, dorsally; two bipinnate spines and about nine simple setae, ventrally. Dactylus long and narrow, with one simple seta, mid-dorsally; one ventral spine and two small simple setae at unguis base; unguis slender.

Pereopod 3 (Fig. 4C) smaller than the pereopod 2. Basis about 3.7 times as long as wide, with four long simple and three penicillate setae, dorsally; one penicillate ventral seta, and a tuft of six long simple setae, distoventrally. Ischium short, wider than long, with a tuft of five long simple setae, distoventrally. Merus about 1.2 times as long as wide, with one bipinnate spine and eight simple setae, ventrally; three simple setae and one small bipinnate spine, subterminally. Carpus about 1.5 times as long as wide, longer than merus, with one bipinnate spine and two very long simple setae, exceeding the tip of the propodus, dorsally; one bipinnate spine and six long simple setae, ventrally; two bipinnate spines and four long simple setae on lateral surface; and one small simple seta, subterminally. Propodus 2.3 times as long as wide, longer than carpus, with eight long simple setae, three bipinnate spines and one penicillate seta, dorsally; five simple setae and two bipinnate spines, ventrally; two bipinnate spines on lateral surface, and one very small spine at dactylus base. Dactylus with one mid-dorsal simple seta; one mid-ventral spine and two small setae at unguis base; unguis slender.

Pereopod 4 (Fig. 5A) basis with three dorsal penicillate setae; one proximal penicillate seta and five distal simple setae, ventrally. Ischium short, wider than long, with six simple setae, distoventrally. Merus about 2.1 times as long as wide, with one distal simple seta, dorsally; two bipinnate spines and 15 simple setae, ventrally. Carpus 3.8 times as long as wide, longer than propodus or merus, with three long

simple setae, dorsally; about 10 simple setae and four bipinnate spines, ventrally, and three bipinnate spines terminally. Propodus about 2.8 times as long as wide, with one penicillate seta, dorsally, and a distoventral crown of about 14 serrated setae (eight of them smaller); four simple setae and three bipinnate spines, ventrally; Dactylus with two small ventral setae at unguis base; unguis slender.

Pereopod 5 (Fig. 5B) basis 3.2 times as long as wide, with two penicillate setae, dorsally, and three simple setae, distoventrally. Ischium short, wider than long, with six simple setae, distoventrally. Merus about 1.2 times as long as wide, with one simple seta, dorsodistally; two bipinnate spines and about 10 simple setae, ventrally. Carpus three times as long as wide, longer than propodus or merus, with seven bipinnate spines and about 11 long simple setae, in two rows, ventrally; five long simple setae, exceeding the propodus length, subterminally. Propodus (Fig. 5B') about 3.7 times as long as wide, with one penicillate seta, dorsoproximally; eight long simple setae, eight long bipinnate spines, and six small serrated setae, ventrally; Dactylus with one simple seta, mid-dorsally, and two small simple setae at unguis base, ventrally; unguis well developed.

Pereopod 6 (Fig. 5C) a little smaller than the previous one, basis about 2.8 times as long as wide, with about 15 long plumose and three proximal small penicillate setae, dorsally, 14 long simple setae and one small simple seta, ventrally; Ischium short, wider than long, with seven simple setae, ventrally. Merus about 1.4 times as long as wide, with three long plumose setae (thicker proximally), dorsally; nine long simple setae and one distal bipinnate spine, ventrally; three long simple setae, terminally. Carpus about 2.5 times as long as wide, longer than propodus or merus, with five long plumose setae (thicker proximally), dorsally; 10 bipinnate spines and 10 long simple setae in two rows, ventrally; four long simple setae, exceeding the propodus length, terminally. Propodus (Fig. 5C') about 2.5 times as long as wide, with one distodorsal penicillate seta; four bipinnate spines, about 23 small serrated setae, the last seven having an opposite orientation of setulation, and three long serrated setae, ventrally; three bipinnate spines on lateral surface. Dactylus with two small simple setae at unguis base, ventrally; unguis well developed.

Pleopods biramous, in five pairs, alike, with well-developed peduncle; exopods shorter than endopods. Pleopod 1 (Fig. 5D) with four outer and four inner plumose setae on peduncle; exopod with 14 and endopod with 15 long plumose setae, around.

Uropod (Fig. 2A) peduncle about 1.4 times as long as wide, with about seven distal simple setae. Exopod with three articles (the last one longer than the first two combined) having three long simple setae (one seta longer than exopod length), terminally. Endopod with 31 articles, some of them with two or three penicillate setae and one or two simple setae; the last article with four-five long simple setae, terminally.

Description of male

Body (not illustrated) dorsoventrally flattened, length about 5.3 mm.

Pereon (not illustrated). Pereonite 1 with rounded posterolateral corner. Pereonites 2–6 with a spiniform process on each posterolateral corner. Pereonite 3 without hyposphenium. Genital cone present, on pereonite 6.

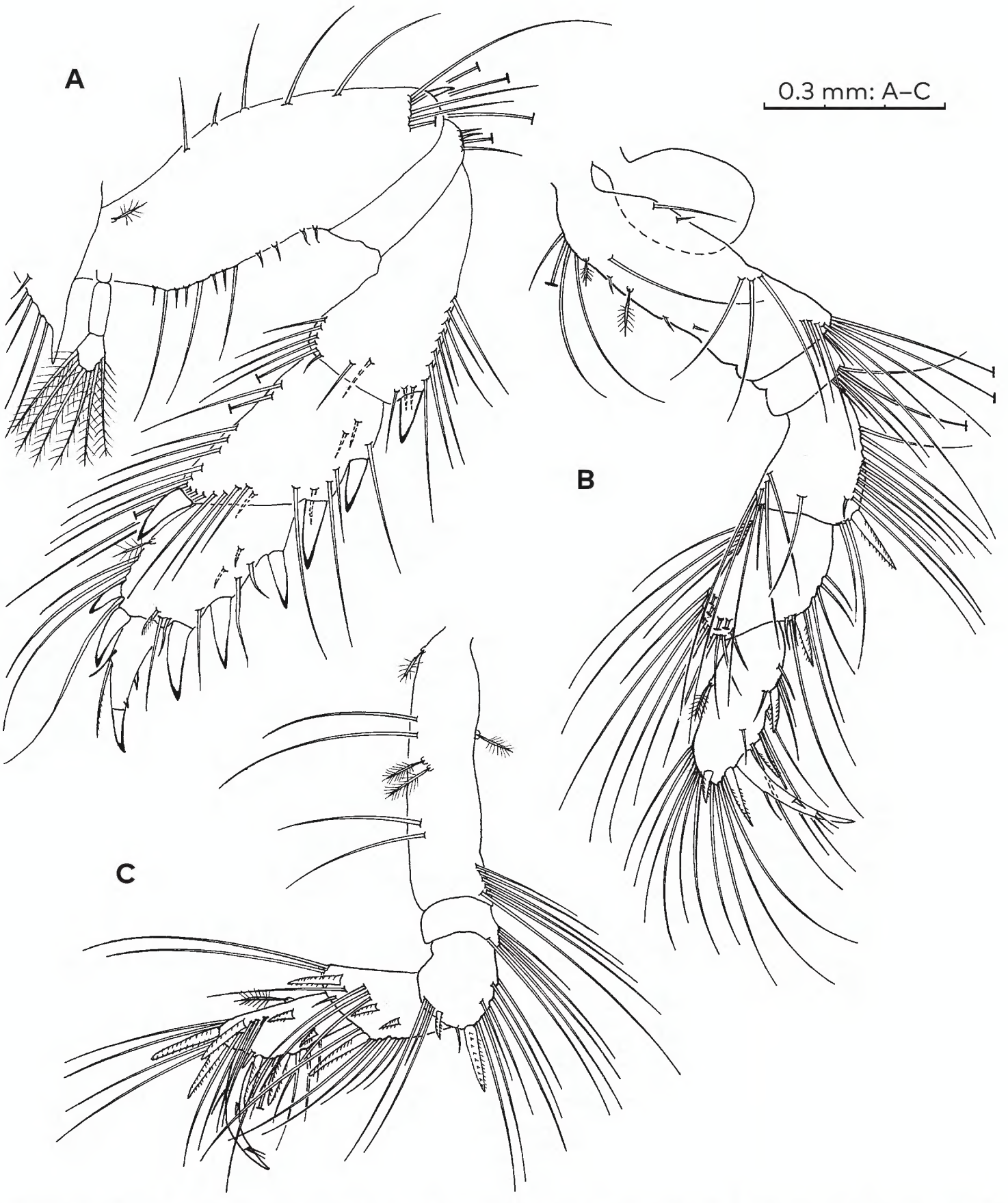

Figure 4. *Apseudopsis apocryphus*, female with oostegites: **A** pereopod 1; **B** pereopod 2; **C** pereopod 3.

Antennule (Fig. 6A) with first peduncular article, longest, about 2.8 times as long as wide, inner side with about 12 long simple setae, proximally with tiny hairs; outer side with 14 penicillate and six long simple setae, proximally with some scales and tiny hairs. Article 2 about 0.4 times as long as article 1, with seven simple setae on the inner side; five penicillate setae, distally; five long simple setae on the outer side. Article 3 shortest, about 0.46 times as long as article 2, with three simple setae on the

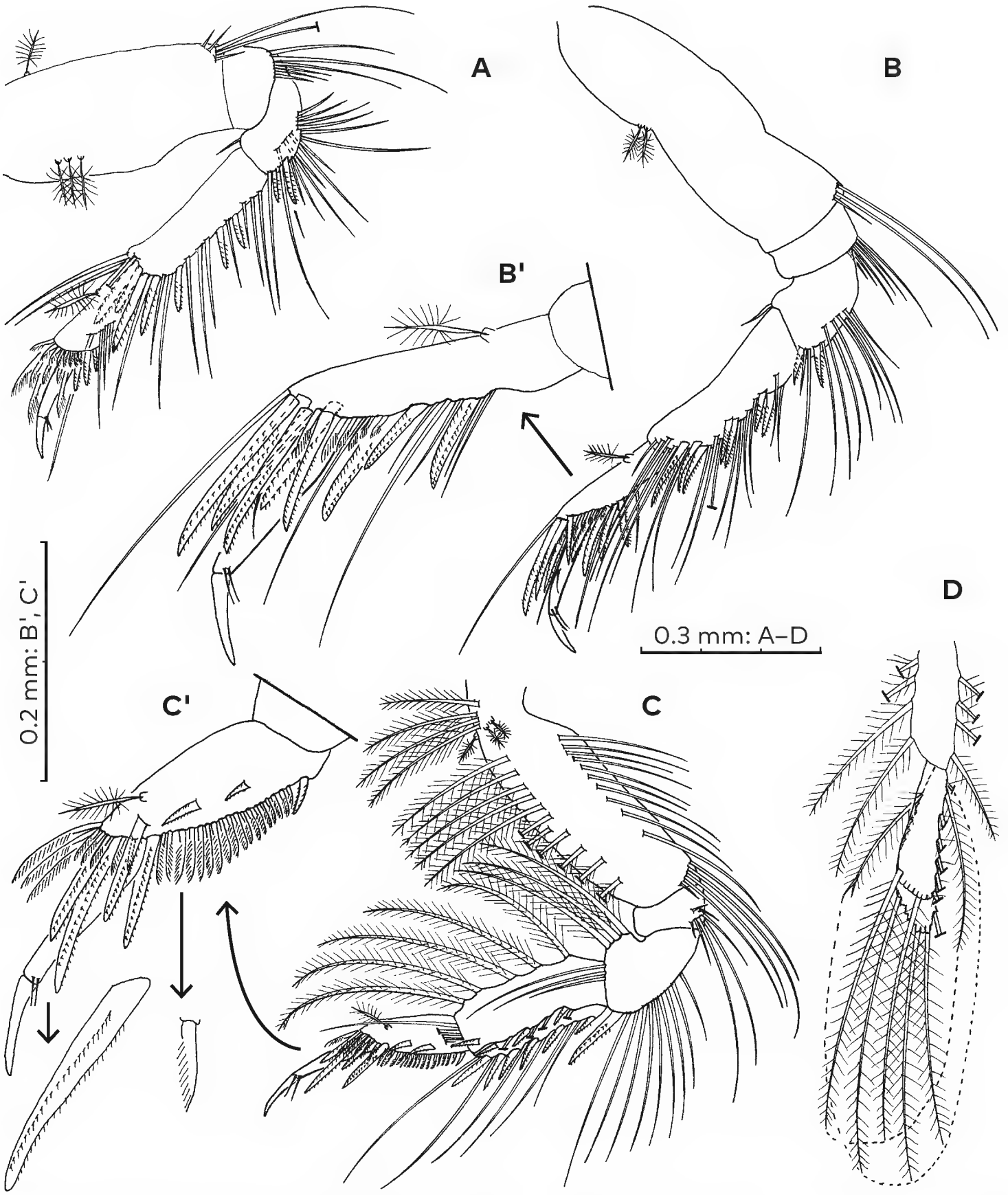

Figure 5. *Apseudopsis apocryphus*, female with oostegites: **A** pereopod 4; **B** pereopod 5; **B'** detail of propodus; **C** pereopod 6; **C'** detail of propodus; **D** pleopod 1.

inner side and one long simple seta on the outer side, distally. Article 4 (common) with three penicillate setae and one simple seta. Inner flagellum with three articles, first two articles with one penicillate seta and one to three simple setae; article 3 with one penicillate seta and three long simple setae, terminally. Outer flagellum with 10 articles, articles 1, 2, 4, 6, and 8 bearing an aesthetasc and two, three simple setae; article 3 naked; articles 5, 7 and 9 with one simple seta; article 10 with one penicillate seta and three simple setae, terminally.

Antenna (Fig. 6B) peduncle with five articles, first peduncular article 0.8 times as long as wide, having an inner prolongation with four small simple setae. Article 2 largest, about 1.1 times as long as wide, with one inner and one outer small simple seta; on the proximal surface with some rows of scales; squama large, with 12 unequal simple setae around. Article 3 shortest, with one long simple seta, on inner margin, distally. Article 4 longer than the previous one, with two penicillate setae, inner distally. Article 5 longer than article 3 and 4 together, with four simple and three penicillate setae, on the inner side, and two penicillate setae, on the outer side. Flagellum with six articles, articles 1–5 with one to six unequal simple setae, article 4 with one penicillate seta, article 6 with five simple setae, terminally.

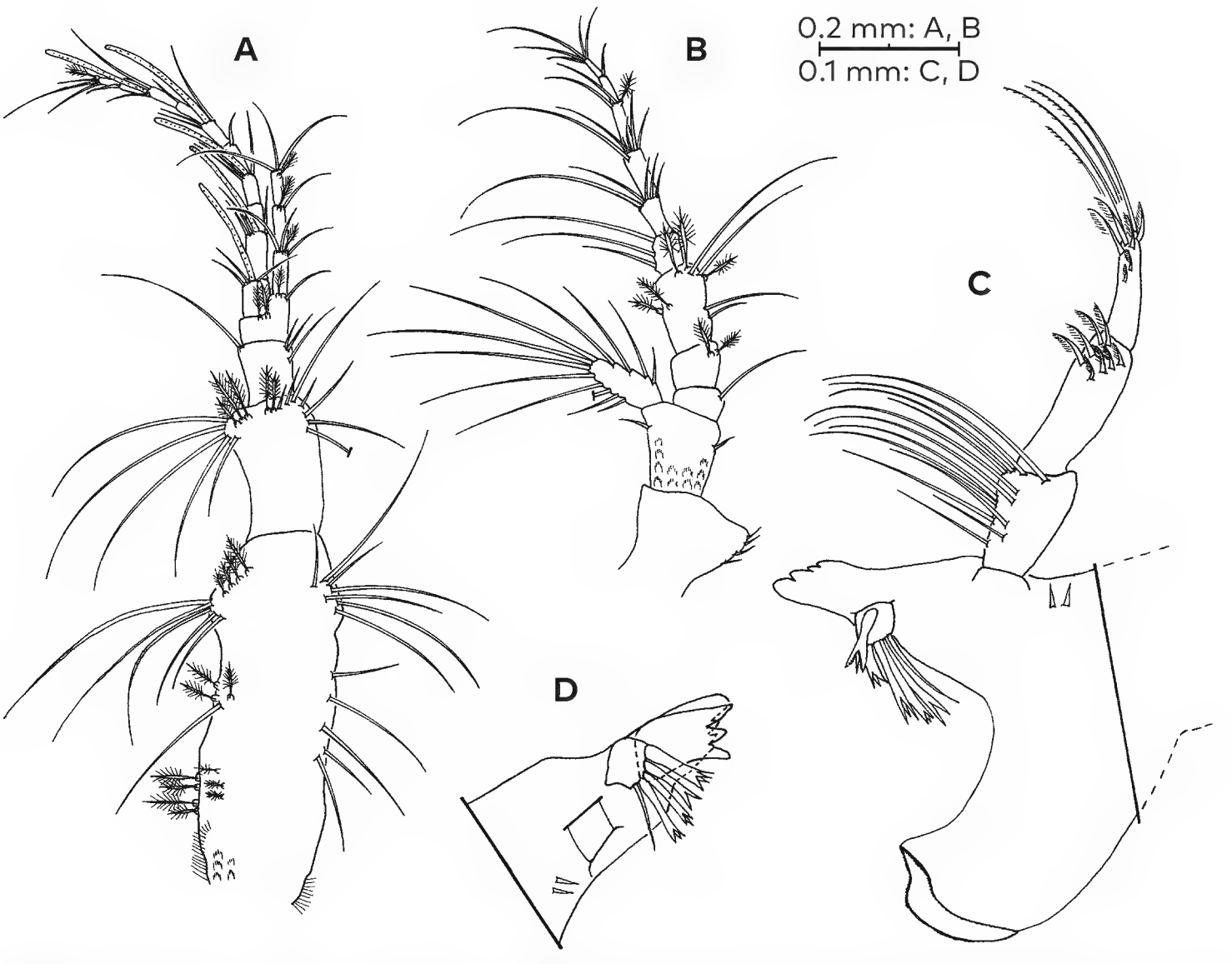

Figure 6. *Apseudopsis apocryphus*, male: **A** antennule; **B** antenna; **C** palp, pars incisiva, setiferous lobe and pars molaris of right mandible; **D** pars incisiva, lacinia mobilis and setiferous lobe of left mandible.

Labrum unstudied.

Mandibles (Fig. 6C, D) with three articled palp; first article about 1.5 times as long as wide, with about 12 long simple setae; article 2 about 2.8 times as long as wide, with two rows of four small and four long serrated setae; article 3 the smallest, about 3.6 times as long as wide, with six serrated setae, subterminally, and four long finely serrated setae, terminally. Pars incisiva of right mandible (Fig. 6C) with four denticles, setiferous lobe with four furcate setae and one simple seta, terminally; one stout furcate seta, subterminally; two very small setae at the base of the palp. Pars molaris well developed. Pars incisiva and lacinia mobilis of the left mandible (Fig. 6D), with four and three denticles, respectively. Setiferous lobe with four furcate setae and one simple seta, terminally; two very small setae at the base of the palp.

Labium and *maxillule* (not illustrated) as in female.

Maxilla (Fig. 7A) with outer lobe of movable endite with nine serrated setae, first two longer and thicker than others, with some finely hairs on the middle of their rachis. Inner lobe of movable endite with three serrated and about nine curved setae. Outer lobe of fixed endite with three thick furcate setae, one serrated seta, two setae broken. Inner lobe of fixed endite with a row of about 23 simple setae (thicker at the base) and behind them, a row with six large and robust bipinnate setae, distally.

Maxilliped (Fig. 7B) coxa short. Basis large, rectangular, about 0.8 times as long as wide; outer margin and inner corners with small denticles; two short and thick simple setae, distally. Palp article 1 short and broad, with one long and thick inner, and one small outer simple seta; outer and inner margins with small denticles. Article 2 largest, with about 23 simple setae disposed in two rows, on the inner margin: one row with six thick and very long simple setae and another row with seven simple and about 10 curved setae; one long and thick simple seta, exceeding article 4, on outer distal corner. Article 3 longer than article 1 and narrower than the previous one, with two rows of simple setae, on distal inner margin: one row seven curved setae and another row with seven long simple setae. Article 4 very small, with two long simple setae, subterminally, and five long simple setae, terminally. Endite (Fig. 7C) with 11 strong truncate setae, four simple setae and two rows of many hairs, on the rostral side; one long and thick simple seta, subterminally. Inner margin with a row of 10 circumplumose setae and four coupling hooks; outer distal margin with small hairs.

Epignath (not illustrated) as in female.

Cheliped (Fig. 7D) stonger than in female. Basis large, about 1.7 times as long as wide; with about 12 long simple setae, and one very small simple seta, dorsally; one small spine and four long simple setae, ventrally; exopod present, tri-articled, last article with four long plumose setae. Merus about 2.8 times as long as wide, with 10 simple setae, ventrally, and four simple setae on lateral side. Carpus longest, 2.3 times as long as wide, dorsally with three proximal and four distal simple setae; about 14 simple setae, ventrally; 10 simple setae on lateral surface; Propodus large, about 1.4 times as long as wide; palm with one mid-dorsal and three dorsodistal simple setae; fixed finger thick, with about six simple setae on both inner and outer surface near dactylus joint, one small serrated seta at dactylus base on the inner side, and two

small simple setae on lateral side; 17 simple setae around the inner and outer margins; proximal with an apophysis, as a tooth; some serrated spinules on the cutting edge;

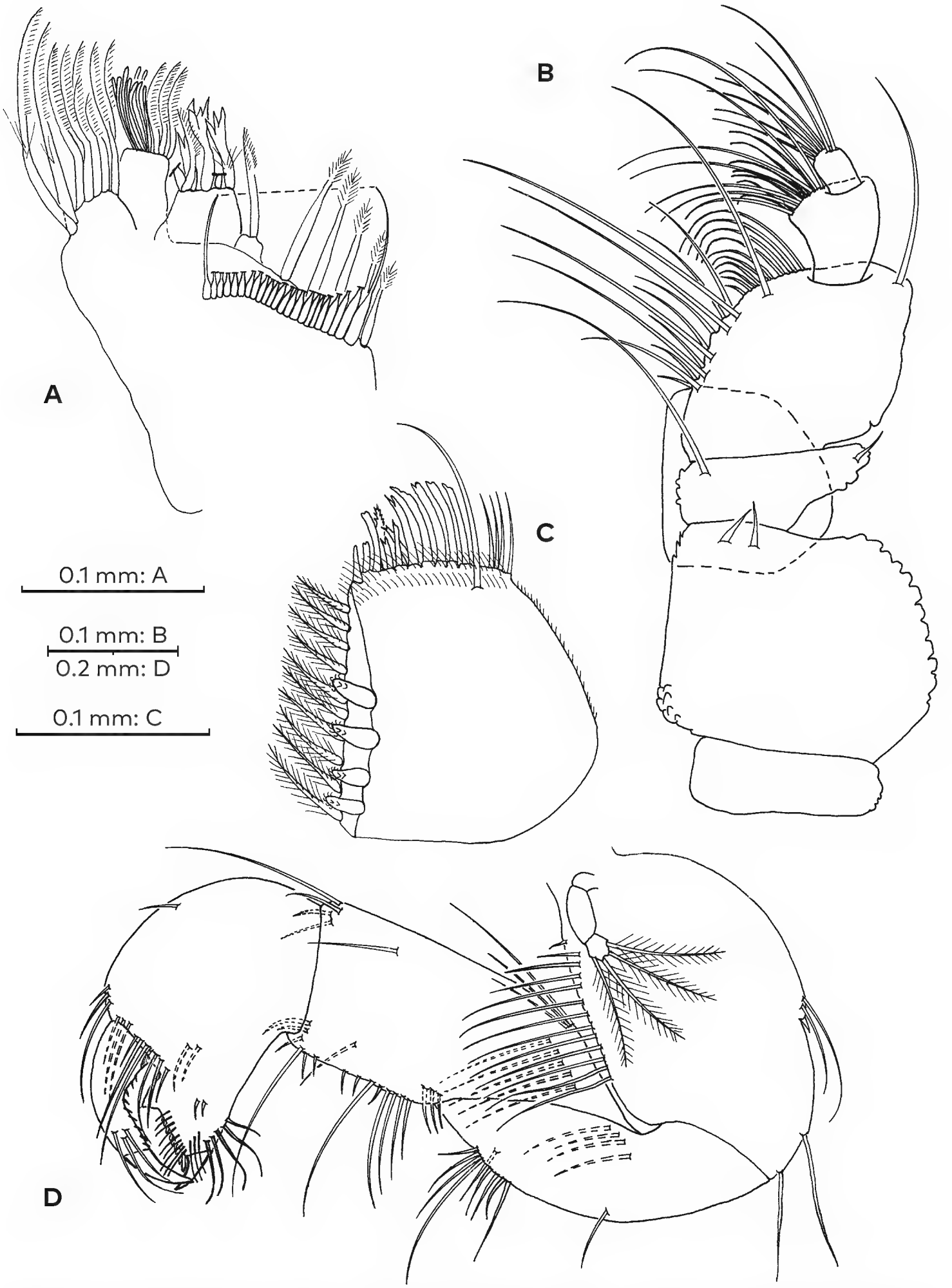

Figure 7. *Apseudopsis apocryphus,* male: **A** maxilla; **B** maxilliped; **C** maxilliped endite; **D** cheliped.

claw stout. Dactylus thinner than the fixed finger, curved, with three long simple setae, distally, on the inner side; cutting edge with some small spines; claw stronger than that of fixed finger.

Pereopod 1 (Fig. 8A) fossorial, largest; coxa with a spiniform prolongation having seven simple setae, visible dorsally at the level of first pereonite. Basis two times as long as wide, with eight simple setae, dorsally; 11 long simple setae, one proximal penicillate seta and one distal small spine, ventrally; exopod present, tri-articled, last article with six long plumose setae. Ischium short, wider than long, with four small simple setae in distoventral corner. Merus about 1.7 times as long as wide, with six long simple setae, dorsally; about 13 simple setae and one strong spine, ventrally; three lateral simple setae, subterminally. Carpus about 1.3 times as long as wide, shorter than merus, with 14 long simple setae (some of them longer than propodus) and one strong spine, dorsally; five simple setae and two strong spines, ventrally; four small simple setae on lateral suface. Propodus about 1.6 times as long as wide, shorter and narrower than carpus, with one penicillate seta, four long simple setae and two strong spines, dorsally; three strong ventral spines alternating with one simple seta (four ventral simple setae in total); one small simple and one serrated seta near dactylus articulation, and three small simple setae on lateral surface. Dactylus slightly longer than the spines of propodus, mid-dorsally with one small and one long simple seta (shorter than unguis length), two mid-ventral and one distal small spines; unguis stout.

Pereopod 2 (Fig. 8B) larger than the following pereopods. Basis 2.1 times as long as wide, with two penicillate setae, one long and one small simple seta, dorsally; about 11 long simple setae, ventrally. Ischium short, with three simple setae, ventrodistally. Merus 1.2 times as long as wide, with six long simple setae, distodorsally; one long ventrodistal bipinnate spine and about nine long simple setae on ventral margin; one long lateral simple seta, subterminally. Carpus 1.6 times as long as wide, longer than merus, with one distal bipinnate spine, and about 13 long simple setae, some of them exceeding the tip of the propodus, dorsally; one bipinnate spine and about seven simple setae, ventrally. Propodus 2.3 times as long as wide, about as long as carpus, with two bipinnate spines, eight long simple setae and one penicillate seta, dorsally; two bipinnate spines and about nine long simple setae, ventrally; two small simple setae, on lateral surface. Dactylus long and narrow, with one simple seta, mid-dorsally; one mid-ventral spine, and two small simple setae at unguis base; unguis slender.

Pereopod 3 (Fig. 9A) smaller than the pereopod 2. Basis about 3.8 times as long as wide, with two long and two small simple setae, and three penicillate setae, dorsally; one penicillate seta, two mid-ventral simple setae, and a tuft of seven long simple setae, distoventrally. Ischium short, with a tuft of seven long simple setae, distoventrally. Merus about 1.2 times as long as wide, with one simple seta, dorsally; one bipinnate spine and eight simple setae, ventrally; three simple setae and one small bipinnate spine, subterminally. Carpus about 1.4 times as long as wide, longer than merus, with one bipinnate spine and one very long simple seta, exceeding the tip of the propodus, dorsally; one bipinnate spine and six long simple setae, ventrally;

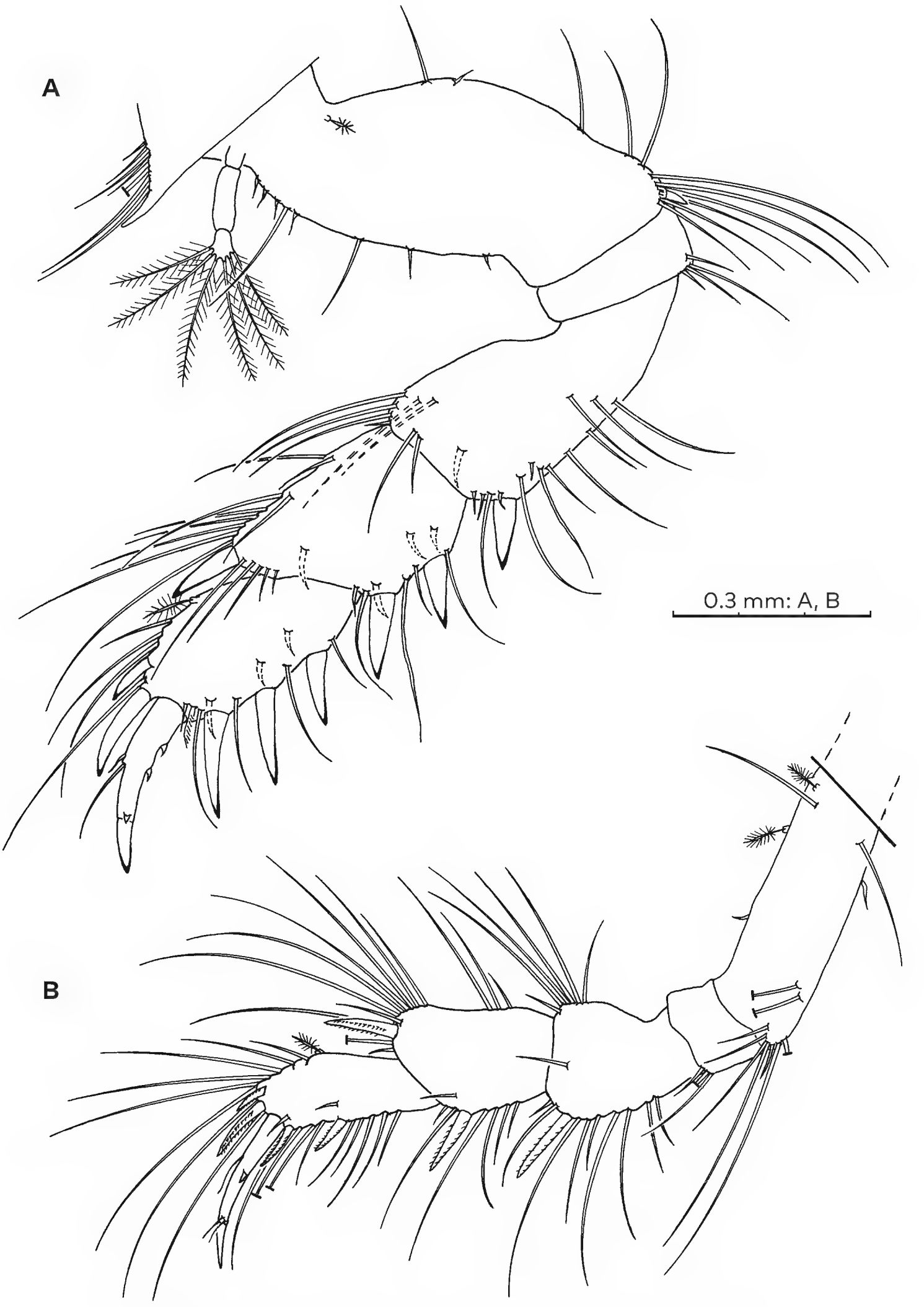

Figure 8. *Apseudopsis apocryphus,* male: **A** pereopod 1; **B** pereopod 2.

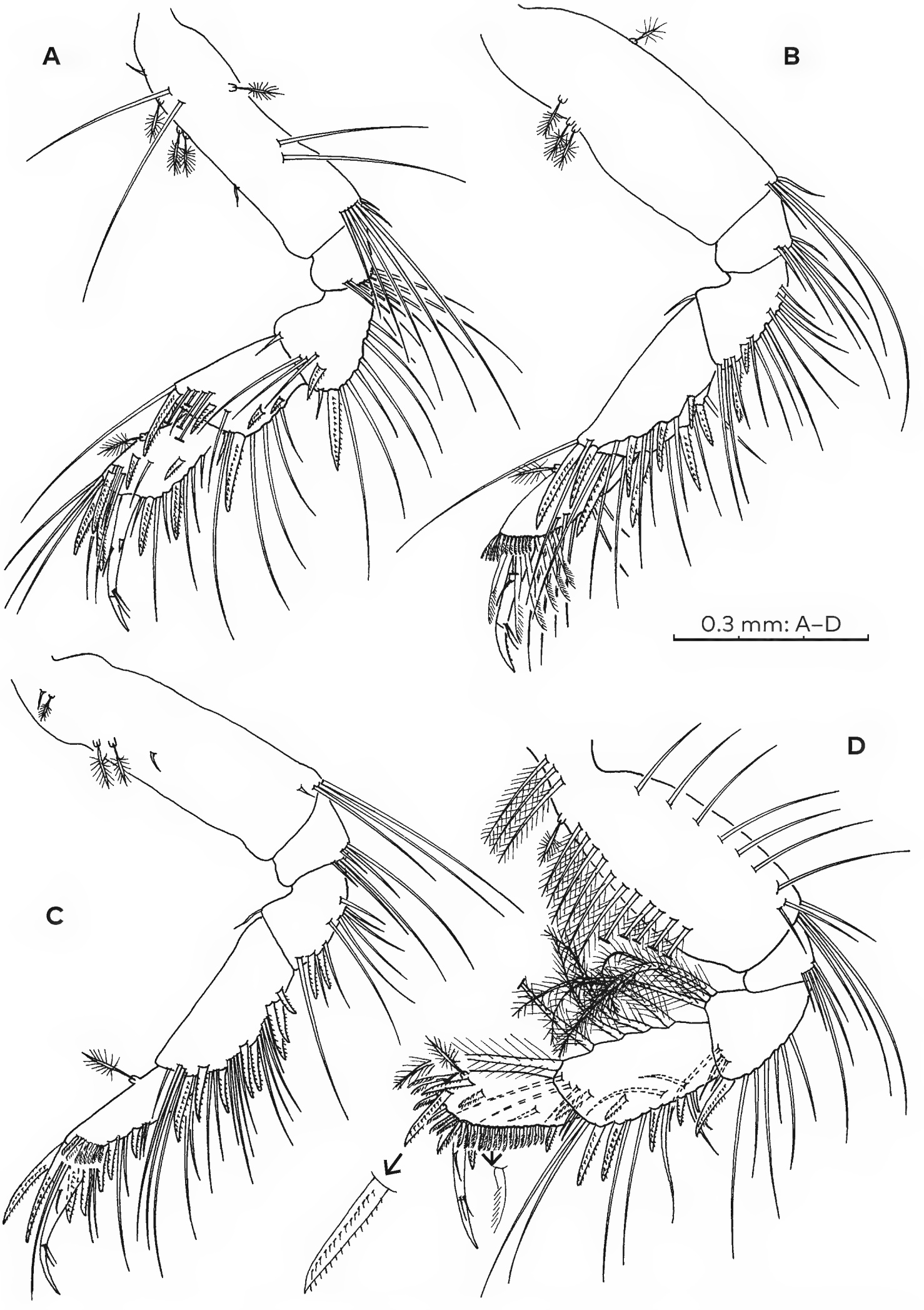

Figure 9. *Apseudopsis apocryphus*, male: **A** pereopod 3; **B** pereopod 4; **C** pereopod 5; **D** pereopod 6.

three bipinnate spines and six long simple setae on lateral surface. Propodus about 1.9 times as long as wide, about as long as carpus, with six long simple setae, three bipinnate spines and one penicillate seta, dorsally; six simple setae and two bipinnate spines, ventrally; two bipinnate spines and one simple seta, on lateral surface. Dactylus with one mid-dorsal simple seta; one mid-ventral spine and two small ventral setae at unguis base; unguis slender.

Pereopod 4 (Fig. 9B) similar to female, with few exceptions: basis about 2.6 as long as wide; merus about 1.5 times as long as wide, with one simple seta, distodorsally; two bipinnate spines and about 12 long simple setae, ventrally; carpus about 2.2 times as long as wide, longer than propodus or merus, with one very long simple seta, distodorsally; nine bipinnate spines and about 10 long simple setae in two rows, ventrally; propodus about 2.3 times as long as wide, with one penicillate seta, dorsoproximally, and a distoventral crown of about 19 serrated setae (13 of them smaller) and six simple setae, ventrally; there are no spines; dactylus with one mid-dorsal simple seta, and two ventral simple setae at unguis base; unguis well developed.

Pereopod 5 (Fig. 9C) basis about 2.9 times as long as wide, with three penicillate and two small simple setae, dorsally; three long simple setae and one small simple seta, distoventrally. Ischium short, with six simple setae. Merus about 1.8 times as long as wide, with one simple seta, distodorsally; two bipinnate spines and about nine simple setae, ventrally. Carpus 2.5 times as long as wide, longer than propodus or merus, with eight bipinnate spines and about 12 long simple setae, in two rows, ventrally; four long simple setae, subterminally. Propodus 3.4 times as long as wide, with one penicillate seta, dorsoproximally; seven bipinnate spines, seven long simple and eight small serrated setae, ventrally. Dactylus with one mid-dorsal simple seta, and two small ventral simple setae at unguis base; unguis slender.

Pereopod 6 (Fig. 9D) basis about 2.4 times as long as wide, with about 14 long plumose setae and one penicillate seta, dorsally; 13 long simple setae, ventrally. Ischium short, with a tuft of five simple setae, ventrally. Merus about 1.5 times as long as wide, with three long plumose setae (thicker proximally), dorsally; about six long simple setae and one distal bipinnate spine, ventrally; three simple setae, subterminally. Carpus about two times as long as wide, longer than propodus or merus, with five long plumose setae (thicker proximally), dorsally; five bipinnate spines and nine long simple setae, ventrally; one bipinnate spine and five simple setae subterminally and terminally. Propodus 2.4 times as long as wide, with one distodorsal penicillate seta; ventral margin with three bipinnate spines, and about 22 serrated setae, the last seven having an opposite orientation of setulation; three bipinnate spines and one small seta on lateral surface. Dactylus with one mid-dorsal simple seta, and two small ventral simple setae at unguis base; unguis slender.

Pleopods biramous, in five pairs, alike, with well-developed peduncle; exopod, a little shorter than endopod. Pleopod 1 (Fig. 10A) basal article with four outer and five inner plumose setae, exopod with 14 and endopod with 15 long plumose setae, around.

Uropod (Fig. 10B) peduncle similar to female; exopod with three articles (the last one longer than the first two combined) having three very long simple setae (all longer than exopod length), terminally; endopod with 32 articles, some of them with two or three penicillate setae and one or two simple setae; the last article with four-five long simple setae, terminally.

Intraspecific variation. *A. apocryphus* displays some degree of variation between left and right side of the same specimen, and among the individuals examined in this study and from Guțu (2002: 31–33, fig. 7) diagnosis and illustrations, for example:

(1) Number of articles of the antennular outer flagellum observed on females with oostegites, and males vary from 8–10; inner flagellum has a constant number of three articles.
(2) Number of articles of the antennal flagellum of females with oostegites, and males vary from five-six.
(3) Number of simple setae around antennal squama of females with oostegites, and males vary from 8–12.
(4) Number of dorsal long simple setae of cheliped basis of females with oostegites, and males vary from 4–12.
(5) Holotype left pereopod 1 propodus with four ventral spines (proximal one smaller), right propodus with only three ventral spines; the other three specimens (1 allotype and 2 paratypes) left and right pereopod 1 propodus with a constant number of three ventral spines.
(6) Number of articles of the uropodal endopod of females with oostegites, and males vary from 27–32; uropodal exopod always with three articles.

Size-distribution. The females with oostegites body length ranged from 3.3 to 5.0 mm. Males body length ranged from 5.3 to 5.6 mm.

Apseudopsis bacescui (Guțu, 2002)

Material examined. Holotype: 1 female with oostegites (length about 6.6 mm), Expedition "Calypso", Balearic Sea, near Barcelona (Spain), 28 July 1977, depth 13 m, deposited in the collections of "Grigore Antipa" National Museum of Natural History, No. 250.200.

Allotype: 1 male (length about 6.8 mm), with the same collecting data, deposited in the same museum, No. 250.201.

*Paratypes:*1 subadult male (dissected), 1 adult male (undissected) and 1 female with oostegites (undissected), from a lot of 12 specimens, with the same collecting data, deposited in the same museum, No. 250.202.

Description of subadult male

Body (Fig. 11A) dorsoventrally flattened, approximately six times as long as wide; length about 5.7 mm.

Cephalothorax (Fig. 11A) (including rostrum) approximately 17% of body length, about as long as wide, with two small medial simple setae, on each lateral

side. Rostrum pointed, with rounded shoulders, relatively long and broad at base. Eyelobes unpigmented, with a spine-like process.

Pereon (Fig. 11A) approximately 58.2% of body length, about 3.5 times as long as carapace length; decreased in width from the first pereonite to the last; each pereonite much wider than long, about 0.41, 0.66, 0.7, 0.73, 0.71 and 0.61 times as long as wide. First pereonite with five simple setae, posterolaterally. Pereonites 2–6 with a row of 7–14 simple setae on the inner of anterolateral corners and two to four posterolateral simple setae. Pereonites 1–6 with a spiniform processes on each posterolateral corner. Pereonites 2 and 3 with hyposphenia (Fig. 11A') and pereonite 6 with genital cone.

Pleon (Fig. 11A, A") approximately 17.3% of body length, about as long as first two pereonites together, with five short pleonites, bearing pleopods. Each pleonite expanded posterolateral by a spiniform process. Pleonites 1–4 with four or five dorsal simple setae, three to six lateral plumose setae and three caudal plumose setae (except pleonite 4 which has one simple and two plumose setae, caudally). Pleonite 5 with four dorsal, two lateral and two small caudal, simple setae (Fig. 11A"). Each pleonite with a ventral spine-like process, oriented caudally.

Pleotelson (Fig. 11A) about 7.5% of body length, equal to the length of the pereonite 6, about one time as long as wide, with a swelling in the first half of each lateral side, bearing about four simple setae.

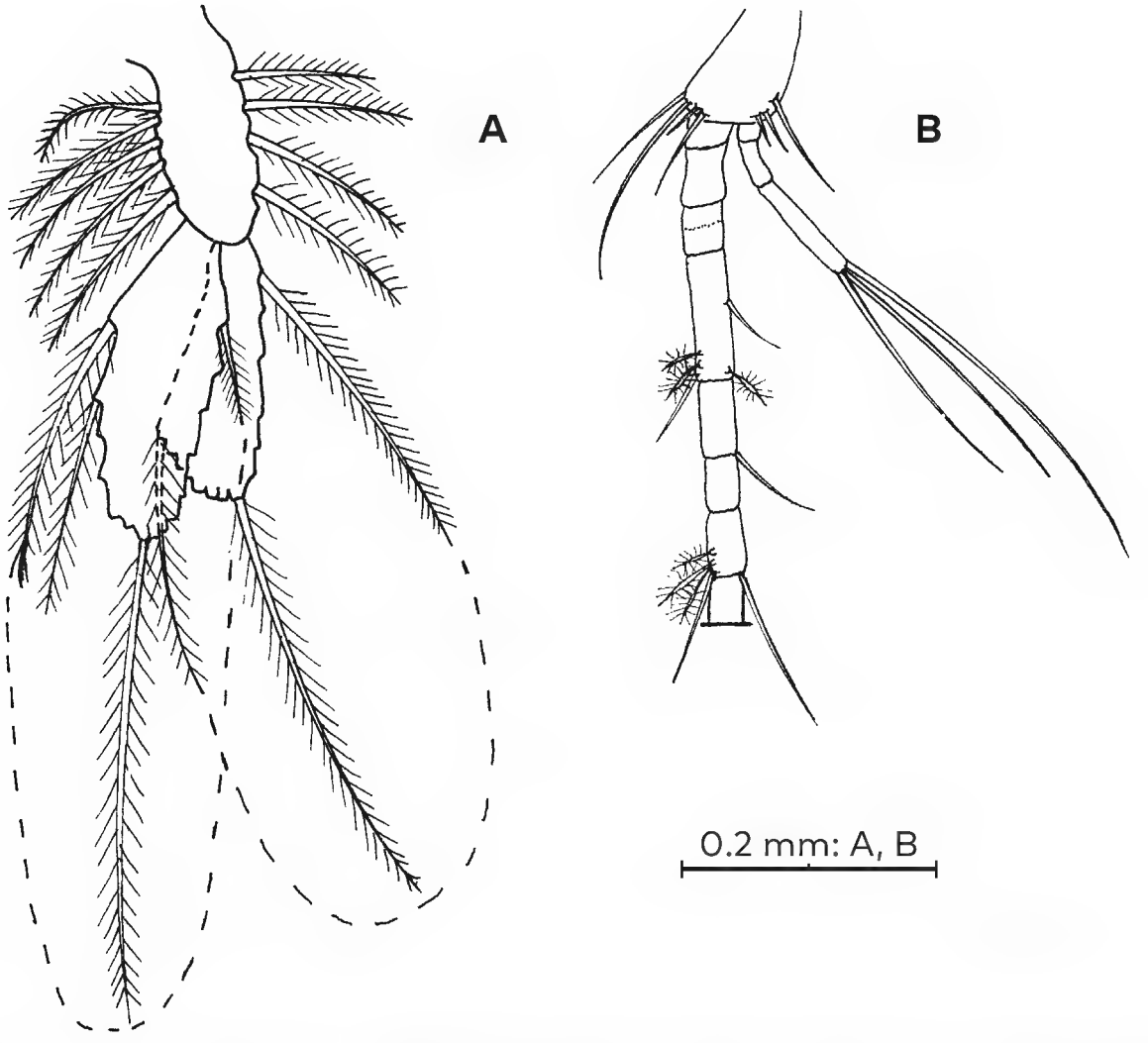

Figure 10. *Apseudopsis apocryphus*, male: **A** pleopod 1; **B** uropod, exopod and proximal part of endopod.

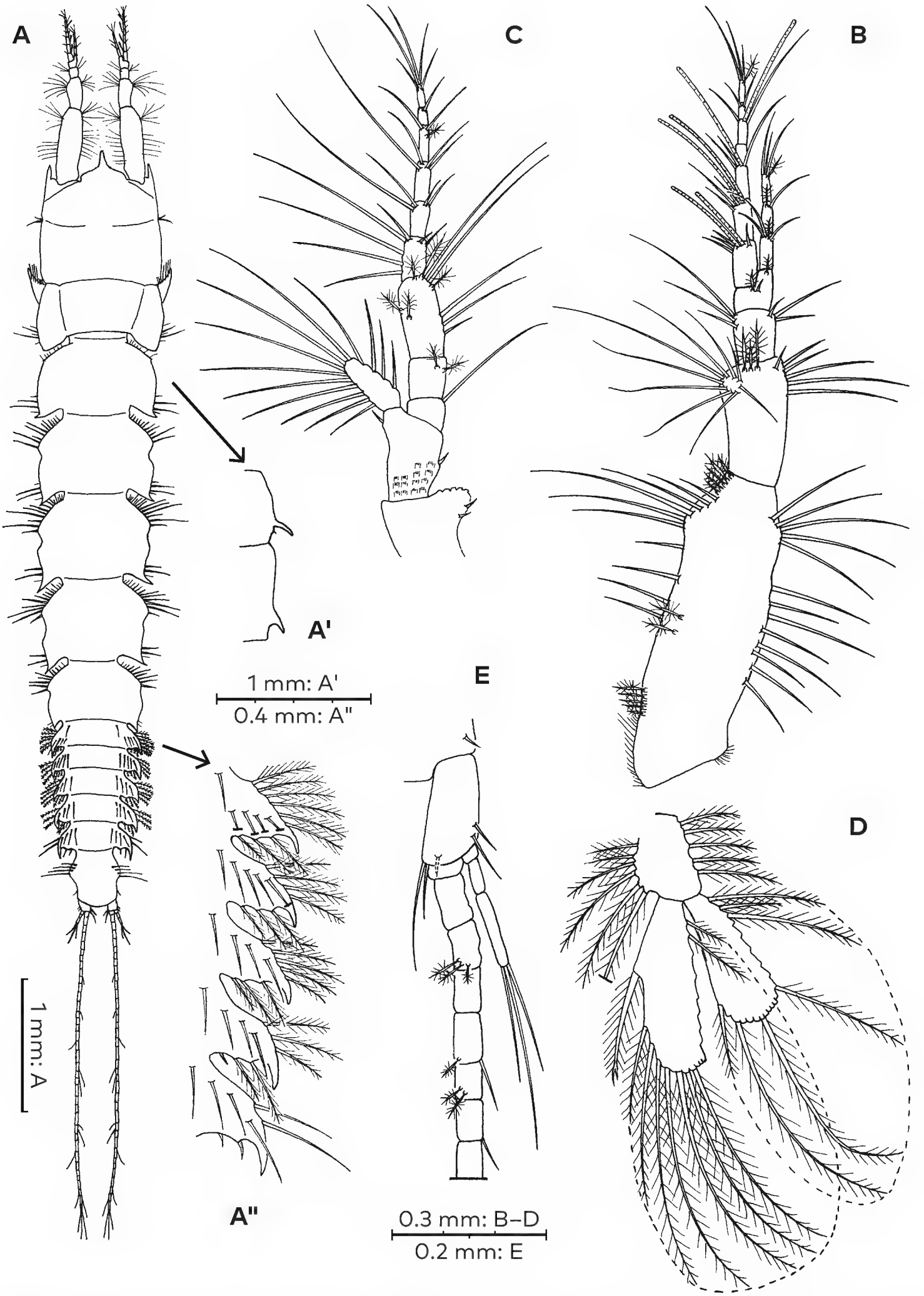

Figure 11. *Apseudopsis bacescui*, subadult male: **A** body, dorsally; **A'** detail of pereonites 2, 3 with hyposphenia, laterally; **A"** detail of pleonites 1–5, dorsally; **B** antennule; **C** antenna; **D** pleopod 1; **E** uropod, exopod and proximal part of endopod.

Antennule (Fig. 11B) with first peduncular article longest, three times as long as wide, inner side with about 13 unequal simple setae, disposed in two tufts, and some tiny hairs, proximally; outer side with about 10 unequal simple setae and about 12 penicillate setae, disposed proximally, medially and distally, and some tiny hairs, proximally. Article 2 about 0.4 times as long as article 1, with six and nine long simple setae on the inner and outer distal sides, respectively, and three penicillate setae, distally. Article 3 shortest, about 0.4 times as long as article 2, with three inner and three outer simple setae, distally. Article 4 (common) with two penicillate setae and one small simple seta. Inner flagellum with three articles, each of them with one penicillate seta and one to three simple setae; last article with one penicillate seta and three simple setae, terminally. Outer flagellum with seven articles; articles 1–3 and 5 with two to four simple setae and one or two aesthetascs; article 4 naked; article 6 with two simple setae; last article with one penicillate seta and three simple setae.

Antenna (Fig. 11C) peduncle with five articles, first peduncular article short and thick, having an inner dentiform expansion and two small simple setae. Article 2 largest, 1.5 times as long as wide, with one small simple seta on mid-inner side and one on outer distal side; proximally with some rows of scales; squama large, with 13–14 unequal simple setae around. Article 3 shortest, with one inner long simple seta, distally. Article 4 longer than article 3, with two penicillate setae, inner distally. Article 5 longer than articles 3 and 4 together, with five long simple and three penicillate setae, on the inner side, and two penicillate setae, mid-outer. Flagellum with six articles; article 1 with seven simple setae; articles 2 and 3 with four long simple setae; article 4 with one penicillate seta and two simple setae; article 5 with one simple seta; article 6 with five terminal long simple setae.

Labrum (Fig. 12A) without special features; distally and laterally with many setulae.

Mandibles, left mandible unstudied, lost in dissection. Right mandible (Fig. 12B, C) with three articled palp, article 1 about 1.9 times as long as wide, with about 11 long simple setae; article 2 about 2.3 times as long as wide, with four-five serrated setae; article 3 the smallest, about 2.7 times as long as wide, with four-five serrated setae subterminally and six long finely serrated setae, terminally. Pars incisiva of right mandible (Fig. 12B) with four denticles, setiferous lobe with five furcate setae (one of them stout) and one simple seta, terminally; three very small simple setae at the base of the palp. Pars molaris broken and lost.

Labium (Fig. 12D) with six small denticles on the outer margin of basal lobe and finely hairs rostral, on anterior part. Palp large, ovate, with three spines slightly curved, terminally, with very tiny hairs at their base, and finely long hairs on each side of the palp.

Maxillule (Fig. 12E) with biarticled palp ended in four unequal serrated setae. Outer endite with finely long hairs on both margins, 11 stout spines (one of them denticulated), terminally, and two serrated setae, subterminally. Inner endite with a blunt apophysis on outer margin and five setulose setae, terminally; finely hairs on both margins.

Maxilla (Fig. 12F) with outer lobe of movable endite with 10 serrated setae, first two longer and thicker than others, with some finely hairs on the middle of their rachis. Inner lobe of movable endite with three serrated and about eight curved setae. Outer lobe of fixed endite with four thick furcate setae, three thick serrated and about seven curved setae. Inner lobe of fixed endite with a row of 24–26 simple setae

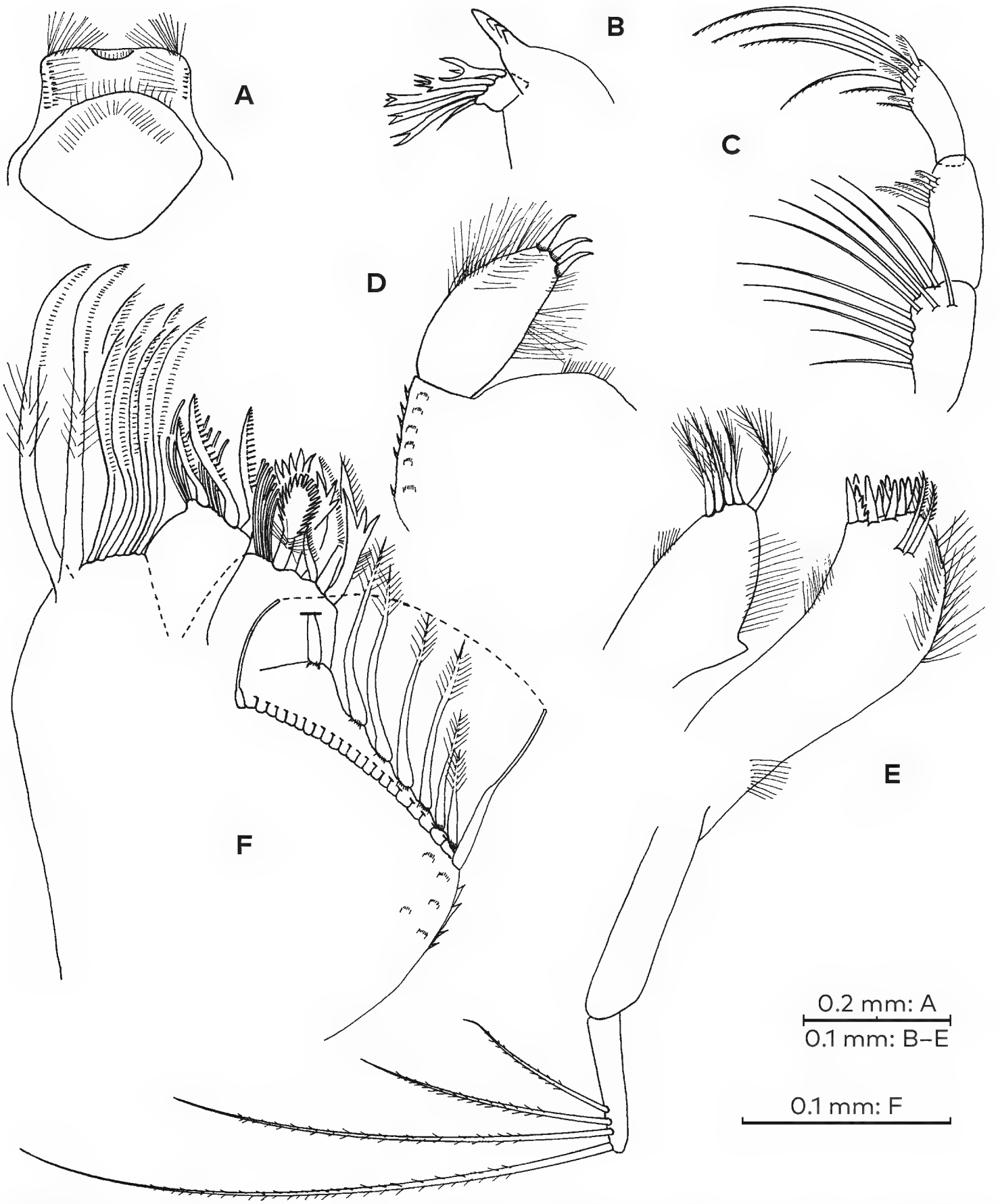

Figure 12. *Apseudopsis bacescui*, subadult male: **A** labrum; **B** pars incisiva and setiferous lobe of right mandible; **C** palp of right mandible; **D** labium; **E** maxillule; **F** maxilla.

(thicker at the base) and behind them, a row with seven large and robust bipinnate setae, distally.

Maxilliped (Fig. 13A) coxa short, with some scales on outer and inner corners. Basis large, about 0.9 times as long as wide, with very small denticles on distal corner of outer margin and proximal corner of inner margin. First palp article short and broad, with one very long and thick simple seta on the inner distal side and one small simple seta on outer distal corner. Article 2 largest, in the first half with about 10 long and thick simple setae, in the second half with a row of about 10 simple setae interspersed with a row of eight curved simple setae, one very long and thick seta, longer than the fourth palp article, on the inner margin; one long and thick simple seta, on outer distal corner (exceeding article 4). Article 3 longer than article 1 and narrower than the previous one, with two rows of setae, on distal inner margin: one row with eight simple setae and another row with seven long finely serrated setae. Article 4 small, with three long simple and four thick and finely serrated setae, some of them disposed subterminally. Endite (Fig. 13B) with nine strong truncate setae, four simple setae and one row of many hairs, on the rostral side; one long and thick simple seta, subterminally. Inner margin with a row of 10 circumplumose setae and four coupling hooks; outer distal margin with many hairs.

Epignath (not illustrated) without special features.

Cheliped (Fig. 13C) stronger than in females. Basis about 1.8 times as long as wide, with about seven long simple setae, dorsally; one small spine and about nine long simple setae, ventrally; exopod present, tri-articled, last article with four long plumose setae. Merus 3.3 times as long as wide, with about 14 unequal simple setae, ventrally, and four or five simple setae on each lateral sides. Carpus longest, approximately three times as long as wide, with about nine long simple setae, dorsodistally; about 17 simple setae, ventrally, and 11–13 long simple setae on each lateral sides. Propodus about 1.6 times as long as wide; palm with one mid-dorsal and about four dorsodistal simple setae and two lateral simple setae, on both sides; one serrated seta and about four simple setae, on the inner side, about six simple setae on the outer side, near the dactylus joint; fixed finger thick with 16 simple setae around the inner and outer margins; proximal with an apophysis, as a tooth (smaller than in adult male), some serrated spinules (about 11) on the cutting edge; claw stout. Dactylus thinner than the fixed finger, with three long finely serrated setae, distally, on the inner side, without proximal apophysis (present in adult male); claw stout, longer than that of fixed finger.

Pereopod 1 (Fig. 14A) fossorial, largest. Coxa small, with a spiniform prolongation having nine simple setae, visible dorsally at the level of first pereonite. Basis thick, about 1.8 times as long as wide, dorsally with about 10 simple setae; about 16 simple setae (nine situated medial and seven in distal corner), one proximal small penicillate seta, and one distal spine, ventrally; exopod present, tri-articled, last article with four plumose setae. Ischium very short, wider than long, with four simple setae, ventrodistally. Merus well developed, about two times as long as wide, with six simple setae, distodorsally; about 14 long simple setae and one strong spine, ventrally; one simple seta, subterminally. Carpus about 1.2 times as long as wide, shorter than merus,

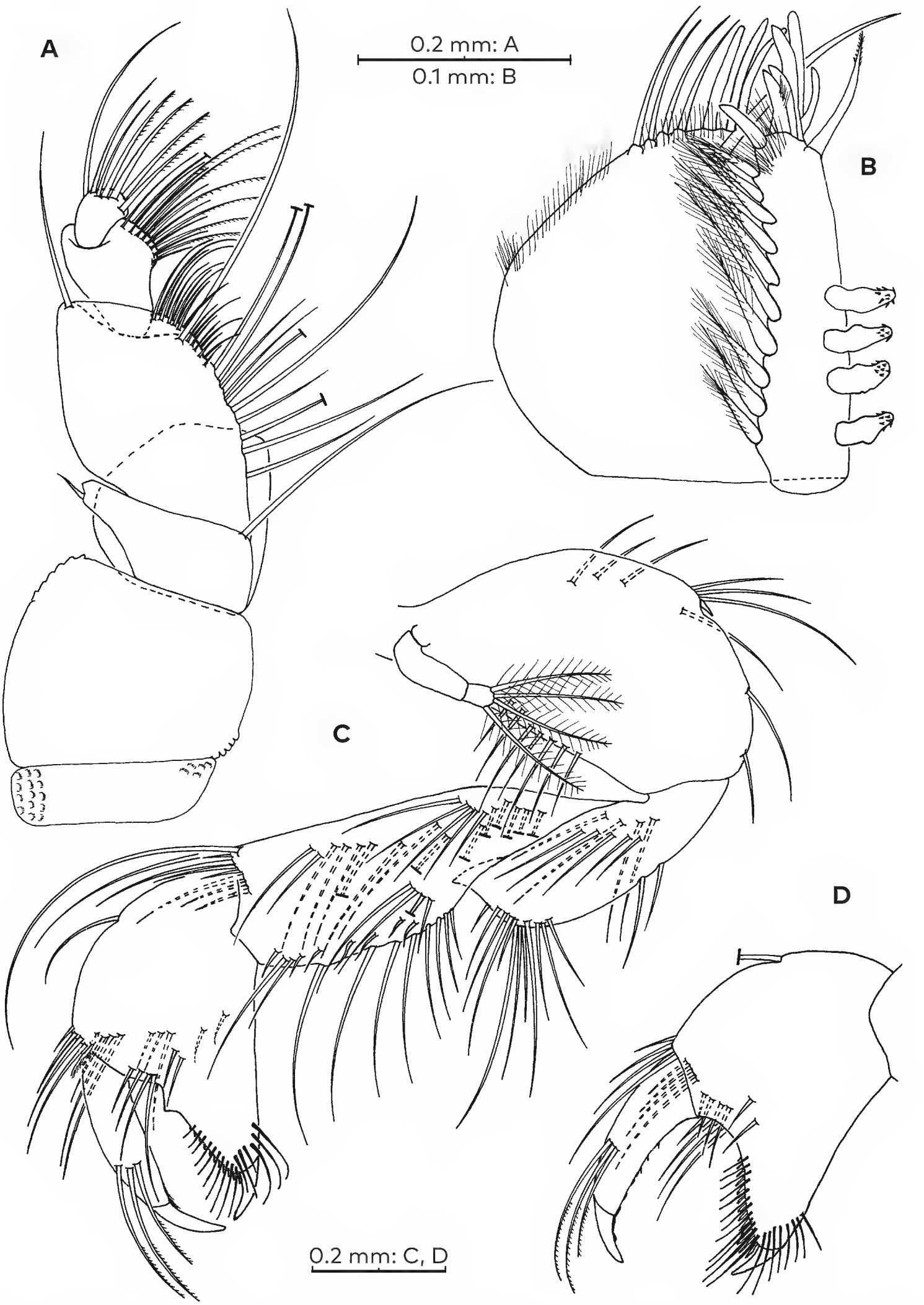

Figure 13. *Apseudopsis bacescui*, subadult male (**A–C**), female with oostegites (**D**): **A** maxilliped; **B** maxilliped endite; **C** cheliped; **D** chela.

with about 19 long simple setae (some of them longer than propodus) and one strong spine, dorsally; six simple setae and two strong spines on ventral side, two small simple setae on lateral surface; one simple seta, subterminally. Propodus about 1.8 times as long as wide, about as long as carpus but narrower than that, dorsal margin with six long simple setae, one penicillate seta, and two strong spines; four ventral strong spines alternating with one or two simple setae (six ventral simple setae in total); one serrated seta near dactylus articulation; one small simple seta on lateral surface. Dactylus slightly longer than the spines of propodus, mid-dorsally with one small and one long simple seta, one mid-ventral small spine and two ventral simple setae at unguis base; unguis small.

Pereopod 2 (Fig. 14B) larger than the following pereopods. Basis 2.8 times as long as wide, with two penicillate and about 10 simple setae, dorsally; about 17 long simple setae and one penicillate seta, ventrally. Ischium short, with eight simple setae, ventrodistally. Merus about 1.6 times as long as wide, with one small simple seta and six long simple setae, distodorsally; one long bipinnate and one small spine and about 17 long simple setae, ventrally; one simple seta, subterminally. Carpus about 1.6 times as long as wide, longer than merus, with about 19 long simple setae, some of them exceeding the tip of the propodus, and one bipinnate spine, dorsally; one ventrodistal bipinnate spine, smaller than the spine of the merus, and eight long and two small simple setae, ventrally. Propodus about 2.5 times as long as wide, longer than carpus, with two bipinnate spines, one penicillate seta and about 14 long simple setae, dorsally; two bipinnate spines, about 10 long simple setae, ventrally; two small simple setae on lateral surface; one very small simple seta near dactylus articulation. Dactylus long and narrow, with one mid-dorsal simple seta, one mid-ventral spine and two small simple setae at unguis base, ventrally; unguis slender.

Pereopod 3 (Fig. 15A) smallest. Basis about three times as long as wide, with one stout apophysis near coxa joint, two very small simple and three penicillate setae, dorsally; one penicillate and one small simple seta, proximally, and about 11 long simple setae, distoventrally; four long simple setae on lateral surface. Ischium short, with a tuft of seven long simple setae, distoventrally. Merus about 1.3 times as long as wide, with one dorsodistal small simple seta; one long bipinnate and two small bipinnate spines and about 17 long simple setae, ventrally; four lateral simple setae, subterminally. Carpus about 1.5 times as long as wide, longer than merus, with one small simple seta and seven long simple setae and one bipinnate spine, dorsally; one long bipinnate spine and about seven long simple setae, ventrally; three bipinnate spines and five long simple setae, laterally. Propodus about two times as long as wide, about as long as carpus, with one penicillate seta, dorsoproximally, four bipinnate spines and about 12 long simple setae, dorsally; two long bipinnate spines and seven long simple setae, ventrally; three bipinnate spines, laterally. Dactylus with one mid-dorsal simple seta and two small setae at unguis base, ventrally; unguis slender.

Pereopod 4 (Fig. 15B) basis about 2.3 times as long as wide, with three penicillate setae and two small simple setae, dorsally; one penicillate seta and three long simple setae, ventrally; two small simple setae, laterally. Ischium short, with a tuft of six

simple setae, distoventrally. Merus about 1.8 times as long as wide, with one simple seta, dorsodistally; two bipinnate spines and about 12 simple setae, ventrally. Carpus 2.6 times as long as wide, longer than propodus or merus, with 10 bipinnate spines and about 19 long simple setae, ventrally and terminally. Propodus (Fig. 15B') with one dorsoproximal penicillate seta; a distoventral crown of about 32 serrated setae (21 of them smaller) and 10 long simple setae, ventrally; there are no spines. Dactylus with one mid-dorsal simple seta and two small simple setae at unguis base, ventrally; unguis slender.

Pereopod 5 (Fig. 15C) basis 2.5 times as long as wide, with two penicillate and two very small simple setae, dorsally; one penicillate seta and four long simple setae, ventrally; one very small simple seta, laterally. Ischium short, with a tuft of five simple setae, ventrally. Merus about 1.5 times as long as wide, with one simple seta, distodorsally; two small bipinnate spines and about 11 simple setae, ventrally. Carpus 2.5 times as long as wide, longer than propodus or merus, with nine bipinnate spines and about 17 long simple setae, ventrally and subterminally. Propodus 3.2 times as long as wide, with one penicillate seta, dorsoproximally; about 12 long simple setae, one of them longer than dactylus and unguis, three bipinnate spines, four long and 10 small serrated setae, ventrally; one bipinnate spine, laterally. Dactylus with one mid-dorsal simple seta, and two small simple setae at unguis base, ventrally; unguis slender.

Pereopod 6 (Fig. 15D) basis about two times as long as wide, with about 10 long plumose and three small penicillate setae, dorsally; about 23 long simple setae, ventrally. Ischium short, with a tuft of five simple setae, ventrally. Merus 1.5 times as long as wide, with three long plumose setae (thicker proximally), dorsally; about nine long simple setae and one distal bipinnate spine, ventrally; three simple setae, subterminally. Carpus about two times as long as wide, longer than propodus or merus, with nine long plumose setae, dorsally; three bipinnate spines and about nine long simple setae, ventrally; two small and two long simple setae, subterminally. Propodus 2.1 times as long as wide, with one distodorsal penicillate seta; ventral margin with one bipinnate spine, about 26 small serrated setae, the last 11 having an opposite orientation of setulation, and four long serrated setae. Dactylus with one mid-dorsal simple seta, and two simple setae at unguis base, ventrally; unguis slender.

Pleopods biramous, in five pairs, alike, with well-developed peduncle; exopods shorter than endopods. Pleopod 1 (Fig. 11D) with five outer and six inner plumose setae on peduncle; exopod with 21 and endopod with 19 long plumose setae, around. Pleopod 5 (not illustrated) with four outer and four inner plumose setae on peduncle; exopod with 21 and endopod with 19 long plumose setae, around.

Uropod (Fig. 11A, E) peduncle about 1.9 times as long as wide, with about five distal simple setae. Exopod with three articles (the last one longer than the first two combined) having three very long simple setae (one longer than exopod length), terminally. Endopod with about 37 articles, some of them with one to three penicillate setae and one or two simple setae; the last article with three-four long simple setae and two penicillate setae, terminally.

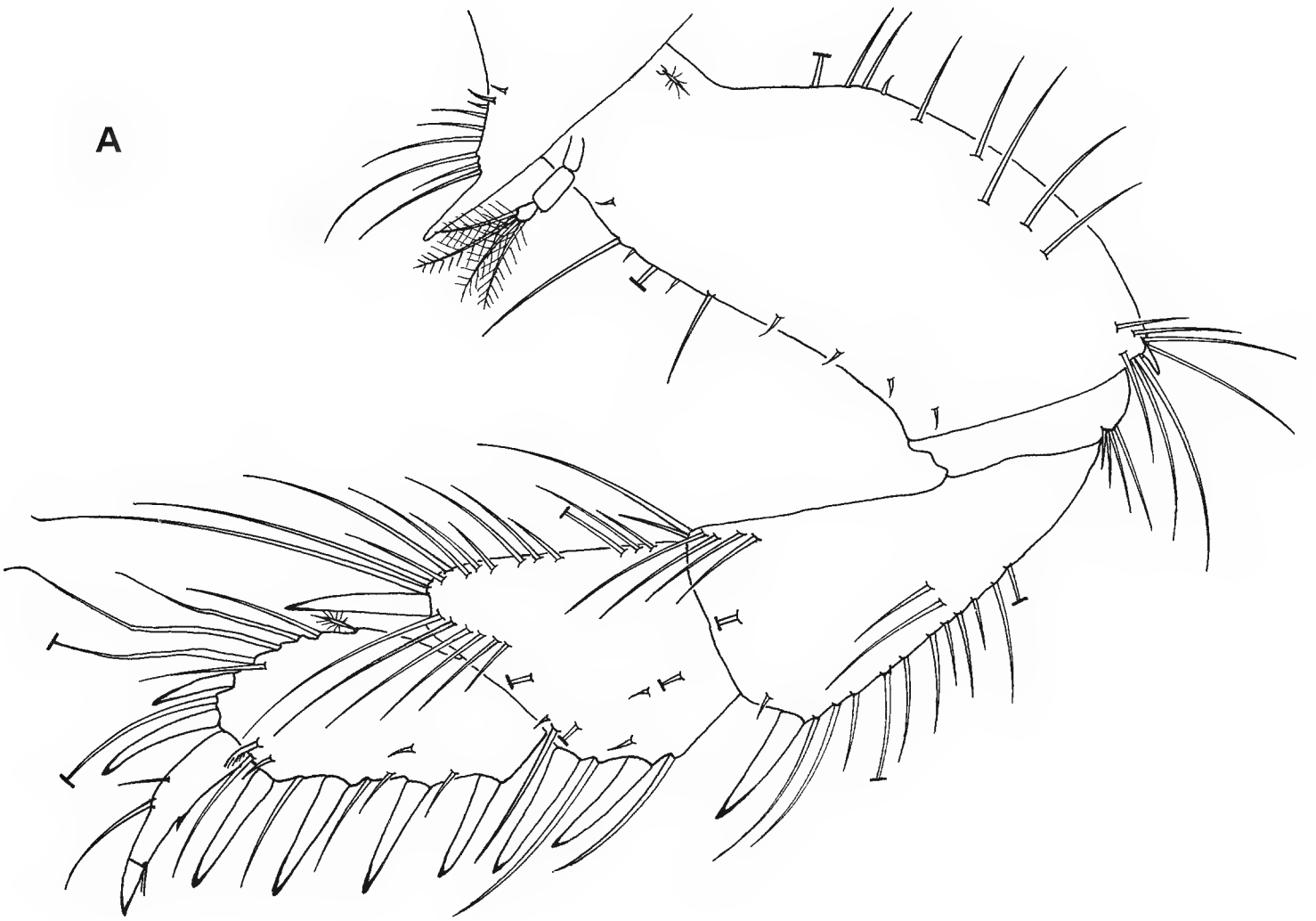

Figure 14. *Apseudopsis bacescui*, subadult male: **A** pereopod 1; **B** pereopod 2.

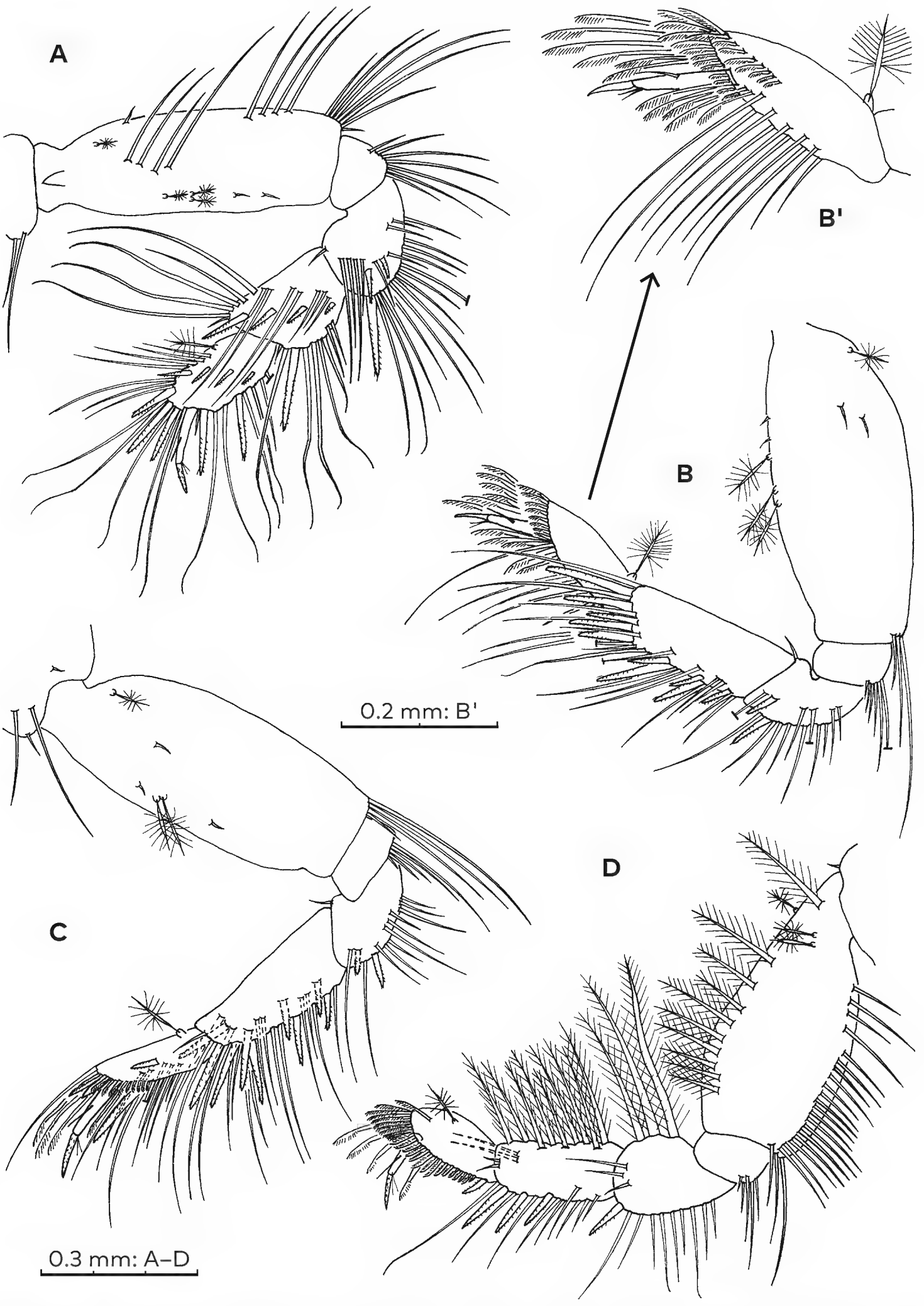

Figure 15. *Apseudopsis bacescui*, subadult male: **A** pereopod 3; **B** pereopod 4; **B'** detail of propodus; **C** pereopod 5; **D** pereopod 6.

Some additional data regarding the female with oostegites

Because of the small numbers of the females with oostegites of *A. bacescui* (only 2) in the collections of "Grigore Antipa" National Museum of Natural History, the observations and drawing were made on the entire specimen, without dissecting the material, therefore it was figured just the chela of a female with oostegites. For the entire cheliped drawing and a concise description see Guțu (2002: 31, fig. 6E).

Body (not illustrated) dorsoventrally flattened, length about 7.1 mm.

Pereon (not illustrated). Pereonites 1–6 with a spiniform process on each posterolateral corner. Pereonites 2 and 3 with hyposphenia. Genital cone conspicuous.

Female with oostegites chela (Fig. 13D). Propodus about 1.3 times as long as wide; palm with one mid-dorsal simple seta, four simple setae, on both sides, dorsodistally, and two lateral simple setae; fixed finger thick, with four simple setae near the dactylus joint, on both sides, and 20 simple setae around the inner and outer margins; some serrated spinules (about 13) on the cutting edge; claw stout, smaller than dactylus claw. Dactylus thinner than the fixed finger, with three long finely serrated setae, distally, on the inner side; claw stout.

Uropod (not illustrated) exopod with three articles (the last one longer than the first two combined) having three very long simple setae (one longer than exopod length), terminally. Endopod with about 34 articles, some of them with one to three penicillate setae and one or two simple setae; the last article with four long simple setae and two penicillate setae, terminally.

Intraspecific variation. *A. bacescui* displays some degree of variation between left and right side of the same specimen, and among the individuals examined in this study and from Guțu (2002: 29–31, fig. 6) diagnosis and illustrations, for example:

(1) Number of articles of the antennular outer flagellum observed on females with oostegites, and males vary from six-seven; inner flagellum has a constant number of three articles.
(2) Number of articles of the antennal flagellum of females with oostegites, and males vary from six-seven.
(3) Number of simple setae around antennal squama of females with oostegites, and males vary from 13–15.
(4) Number of dorsal long simple setae of cheliped basis of females with oostegites, and males vary from 6–12.
(5) Allotype left pereopod 1 propodus with five ventral spines (proximal one smaller), right propodus with only four ventral spines; the other four specimens (1 holotype and 3 paratypes) left and right pereopod 1 propodus with a constant number of four ventral spines.
(6) Number of articles of the uropodal endopod of females with oostegites, and males vary from 32–37; uropodal exopod always with three articles.

Size-distribution. The females with oostegites body length ranged from 6.0 to 7.1 mm. Males body length ranged from 5.7 to 7.6 mm.

Remarks

For intraspecific variation, the most obvious characters were chosen, visible without dissecting the material.

In both species (*A. apocryphus* and *A. bacescui*) studied in this paper, and after re-examination of the material of *A. arguinensis* redescribed in the previous paper (Bâlcu 2021), were observed differences in the morphology of the spines of pereopod 1 compared with the spines of pereopods 2–6 (both in females and males). All the spines of pereopod 1 are thick, chitinized and with a smooth surface, while the spines of pereopods 2–6 are bipinnate spines.

Recently, Lubinevsky et al. (2022a: 567) suggests that the species *A. apocryphus* "is possibly assumed to be *A. mediterraneus* (Băcescu, 1961) (and *vice versa*)". Subspecies *Apseudes latreillii mediterraneus* was described by Băcescu in 1961, then it was validated and, in the same time raised at species rank by Guțu in 2002 (Băcescu 1961; Guțu 2002, 2006: 61).

A. apocryphus was collected only from the Coast of Israel, Levantine Sea, and with a wider depth distribution area (10.5–120 m), compared to *A. mediterraneus*, collected from the Coast of Israel, Greece, Algeria and possibly Italy, with a narrower depth distribution area off Coast of Israel (4.3–41 m) (Lubinevsky et al 2022a: fig. 2 and 567, 2022b: table S1).

The species *A. apocryphus* differ from the other species of the genus, besides other characters, by the presence of hyposphenium on pereonite 3 and three ventral spines on pereopod 1 propodus, statements sustaind also by Lubinevsky et al. (2022a: 567, 569: fig. 6A, B) and Guțu (2002: 31–33, fig. 7B, G).

According to Bamber et al. (2009: 6, 7) 6 specimens of *A. apocryphus* were collected nearby the Coast of Israel, all from depth of 57–62 m, 14 September 2006, and is distinguished from *A. mediterraneus,* which "has constantly four spines" (Guțu 2002: 29, fig. 4G), on pereopod 1 propodus, ventrally, mainly by having one less spine on pereopod 1 propodus, ventrally.

Esquete et al. (2012a: 615, 2016: 257, 2019) present a table with relevant taxonomic characters of the North Atlantic and Mediterranean species of the genus *Apseudopsis* Norman, 1899, which was then updated in the 2019 paper, and a key for the Atlantic and Mediterranean species of *Apseudopsis,* in which the following taxonomic characters are given, for the species *A. apocryphus*: rostum pointed with rounded shoulders; pereonites without apophyses; pereopod 1 propodus with three ventral spines; pereopod 1 merus without dorsal spine; in adults, antennular inner flagellum with three articles, outer flagellum with 8–10 articles; pereonites 3 and 6 with hyposphenia, in females.

After the re-examination of the material and redescription of the species (female with oostegites and male), the following morphological differences of the taxonomic characters were observed, which come in addition to the original description (Guțu 2002: 31–33, fig. 7) and to some data from the literature (Esquete et al. 2012a: 614, 615, 2012b, 2016: 257, 2019; Lubinevsky et al. 2022a: 567), and sustain the validity of

the species *A. apocryphus:* (1) in both sexes, pereonite 1 with rounded posterolateral corner, pereonites 2–6 with a spiniform process on each posterolateral corner; (2) hyposphenium present only on pereonite 3, pereonite 6 with genital cone (whose morphology depends on sexes); (3) pereopod 1 propodus with a constant number of three ventral spines (on the left and right side), only the holotype left pereopod 1 propodus with four ventral spines and right propodus with three ventral spines; (4) females with oostegites body length from 3.3 to 5.0 mm, males body length from 5.3 to 5.6 mm.

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